

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

## SCOPE OF WORK:-

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
PACKAGE-A	IMMOVABLE ITEMS					
100	<b>EARTH WORK: Earth work In excavation, backfilling and disposal including all labour, equipments etc complete 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 ordinary soil including ash which can be excavated by any means including setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 1Km, 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	5295	₹ -	₹ -	0.3134403906%
b	Depth exceeding 2 m but not exceeding 4 m	CUM	1161	₹ -	₹ -	0.0862581721%
103	Earth work in excavation in soft rock 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), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus 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 2 m	CUM	200	₹ -	₹ -	0.0176378551%
b	Depth exceeding 2 m but not exceeding 4 m	CUM	200	₹ -	₹ -	0.0211654262%
107	Earthwork in Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials from compulsorily excavated earth available within a lead upto 1 Km 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	at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	5598	₹ -	₹ -	0.3144696682%
109	Extra over ST No. 101 and 103 to 108 for carriage of material/earth for every 500m or part thereof beyond an initial lead of 1km.					
b	Carriage for disposal of serviceable/unserviceable material/ earth	CUM	15345	₹ -	₹ -	0.1204961483%
111	Supplying and filling sand upto any depth under floors, around foundations, plinths etc. in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.					
a	For 80% Relative Density	CUM	10	₹ -	₹ -	0.0077135414%
2600	<b>LEVELING &amp; GRADING: Levelling &amp; grading works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. as per specification, drawings and as directed by engineer - in - charge for the following:</b>					
2601	Cutting of trees having girth more than 300 mm measured at a height of 1m above ground level including removal of roots, stacking the serviceable material like trunks,branches etc at specified area within the plant boundary and disposal of unseviceable parts/materials within a lead upto 1km etc all complete.					
a	300 mm upto 600 mm girth.	Nos	100	₹ -	₹ -	0.0285709092%
b	601 mm upto 1200 mm girth.	Nos	25	₹ -	₹ -	0.0320139151%
c	1200mm and above.	Nos	5	₹ -	₹ -	0.0297971025%
B2601	Removing, uprooting and disposal of roots of tree(upto approx 1m above the ground level) of all girths more than 300 mm measured etc at specified area and disposal of unseviceable parts/materials within a lead upto 1km etc all complete.					

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a	300mm upto 600mm girth	Nos	100	₹ -	₹ -	0.0234970056%
b	601mm upto 1200mm girth	Nos	25	₹ -	₹ -	0.0220171171%
c	1200mm and above.	Nos	5	₹ -	₹ -	0.0114223233%
2602	Earth work in stripping of top soil upto a maximum depth of 0.30m below ground level so as to exclude all debris, grass, vegetation, bushes including roots and organic materials etc for leveling and grading including dressing to specified levels & grades and compacting the graded/stripped surface by manual/mechanical means, disposal of stripped materials within a lead upto 1km etc all complete as per specification, drawing and as directed by the engineer-in-charge.	SQM	45000	₹ -	₹ -	0.6795406515%
2603	Earth work in excavation upto any depth below ground level in all types of soil including moorum, ash which can be excavated by any means for grading including setting out, levelling, dewatering (wherever required), dressing the sides & bottom, levelling to grade, all lifts, ramming/compacting the excavated bottom/graded surface, stacking/disposal of surplus excavated materials within a lead upto 1km, spreading/levelling of disposed materials etc all complete as per specification, drawing and as directed by the engineer-in-charge.	CUM	25000	₹ -	₹ -	1.4798885299%
A2609	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 300mm compacted thickness so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII) with selected approved soil/soft rock from compulsorily excavated earth available within a lead upto 1km and compacted as specified including re-excavation of stacked earth, all lifts, sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete as per specification, drawing and as directed by the engineer for the following.	CUM	25000	₹ -	₹ -	1.4043840130%
2611	Earth work in filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 300 mm compacted thickness so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII) with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying boorowed soil, royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing, all lead and lifts etc all complete as per specification, drawing and as directed by the engineer in charge.	CUM	100	₹ -	₹ -	0.0202956141%
200	<b>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.</b>					
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 below finished floor level upto depth of 10m from FFL. (For depth greater than 10m from FFL, extra over for additional depth to be paid in Item No 224)	CUM	48	₹ -	₹ -	0.1435769731%
202	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors below finished floor level upto depth of 10m from FFL. (For depth greater than 10m from FFL, extra over for additional depth to be paid in Item No 224)	CUM	425	₹ -	₹ -	1.3605913933%
203	Concrete of grade M15 (1 part cement, 2 part sand, 4 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course, mud mat under and around foundations/floors below finished floor level upto depth of 10m from FFL. (For depth greater than 10m from FFL, extra over for additional depth to be paid in Item No 224)	CUM	544	₹ -	₹ -	1.9702595608%

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204	Concrete of grade M20 (1 part cement, 1.5 part sand, 3 parts of 10-20 mm graded aggregate by volume) under floors, paving, plinth protection, pipe encasing etc complete below finished floor level upto depth of 10m from FFL. (For depth greater than 10m from FFL, extra over for additional depth to be paid in Item No 224).	CUM	100	₹ -	₹ -	0.3758916866%
205	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc for any shape, position or thickness etc complete including with addition of high performance PCE-based BIS approved water reducing admixture of Type-G as per ASTM C-494 of approved make FOSROC/STP/SIKA/BASF or Equivalent having minimum water reduction capability of 30% to achieve required slump in concrete all complete as per specification & drawing below finished floor level upto a depth of 10m from FFL(For depths greater than 10m from FFL, extra over for additional depth to be paid in Item No 224), for the following.					
b	M 25 Grade	CUM	1464	₹ -	₹ -	5.9903084962%
206	Providing and laying Design Mix cement concrete of grade conforming to IS:456 & IS 10262-2009 for reinforced concrete works with sand and graded hard stone aggregate of 20mm nominal size in superstructure for any shape, position or thickness etc complete including with addition of high performance PCE-based BIS approved water reducing admixture of Type-G as per ASTM C-494 of approved make FOSROC/STP/SIKA/BASF or Equivalent having minimum water reduction capability of 30% to achieve required slump in concrete all complete as per specification & drawing upto 10m level above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 225), for the following.					
b	M 25 Grade	CUM	127	₹ -	₹ -	0.5289333018%
212	Screed concrete conforming to IS 456 with sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof upto 10m level above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 225) or thickness, drains etc complete as per following.					
a	01:02:04	CUM	5	₹ -	₹ -	0.0181090033%
A213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in precast works like boundary wall, 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 M20 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	M20	CUM	67	₹ -	₹ -	0.3891230981%
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	2	₹ -	₹ -	0.0013421683%
b	Reinforced cement concrete of all grades	CUM	2	₹ -	₹ -	0.0020730520%
300	<b>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.</b>					

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301	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams & slabs(for which scaffolding work not required for vertical support of bottom face of formwork), mass concrete, trenches, grade slab, paving etc.including chamfering of edges as per drawing, specification and instruction of engineer in charge.					
a	Upto Depth 10m From FGL	SQM	2002	₹ -	₹ -	0.8247291929%
302	Fairface form work with good quality water proof ply wood of minimum 12mm thickness and smooth surface above finished ground floor level for columns, beams, suspended/intermediate floors, roofs, lintels, cantilevers, staircases, landings, balconies, etc. including chamfering of edges as per drawing,for all heights as per specification, drawing and instruction of engineer in charge.					
a	For Height Upto 20m from FGL	SQM	641	₹ -	₹ -	0.2853956573%
304	Providing, fixing and removing formwork in block-outs/pockets and openings (below 0.1 sqm plan area) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer in charge.					
a	Upto 150 mm depth	Each	30	₹ -	₹ -	0.0044577867%
b	Pockets of depths more than 150mm and upto 300 mm depth	Each	20	₹ -	₹ -	0.0048926927%
305	Extra over item no.301 and 302 for curved form work for foundations, footings, beams, walls, trenches, domes, arches etc as per specification.					
a	Extra for Curve Shuttering for Item No. 301	SQM	25	₹ -	₹ -	0.0020537229%
400	<b>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.</b>					
402	Providing, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500D or 500EQR confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer.	MT	113	₹ -	₹ -	5.0237842368%
403	Transportation, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500D or 500EQR or HCRM or any other Grade confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer.(BHEL to supply steel free of cost)	MT	2	₹ -	₹ -	0.0132887950%
500	<b>Roof Treatment works: Roof treatment works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, curing, sampling, testing etc at all level as per specification, drawings and as directed by engineer - in - charge.</b>					
502	Providing and laying underbed/topping grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 15 mm including preparation of surface, batching, mixing, leveling etc all complete.	SQM	25	₹ -	₹ -	0.0029295753%

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A506	Providing and laying 3mm thick APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3 mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufactured of density at 25°C, 0.87 - 0.89 kg/litre and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/5 cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane. (Roof treatment over existing old CGI / asbestos roof, Cleaning of old/ existing roof sheet if required shall be in the scope of agency)	SQM	25	₹ -	₹ -	0.0081159805%
600	<b>JOINTS AND FILLERS: Joints &amp; fillers including all labour, material, equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge.</b>					
602	Supplying and installation of Dura board HD100 or its equivalent as approved by the Engineer, as filler material in joints including nailing, installation as per manufacturer's recommendation etc. all complete.					
c	25 mm wide joints	SQM	3	₹ -	₹ -	0.0019588892%
603	Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves (10 mm thick baker rod to be paid separately):					
a	25mmX25mm groov size	RM	13	₹ -	₹ -	0.0050177282%
700	<b>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.</b>					
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	4	₹ -	₹ -	0.2268131524%
702	Supply, Fabricating, 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	3	₹ -	₹ -	0.2164962152%
800	<b>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.</b>					
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).	CUM	5	₹ -	₹ -	0.0834626292%
1000	<b>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.</b>					

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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.					
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	CUM	220	₹ -	₹ -	0.7203855749%
1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm upto 10m level above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 1014), places and position above plinth including raking out joints, curing, scaffolding etc complete but excluding plastering and painting.					
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	CUM	354	₹ -	₹ -	1.5348630666%
1003	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls, chambers etc. in thickness 115mm upto 10m above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 1015), 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. (Reinforcement payment shall be made separately as per applicable BOQ in 400 Series)					
a	Using fly ash lime bricks confirming to IS 12894 with crushing strength of 75 kg/cm2(including cost of cement for brick making)	SQM	624	₹ -	₹ -	0.3448804714%
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.					
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	SQM	13	₹ -	₹ -	0.0061720412%
1005	Breaking of existing brick work at all levels including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	CUM	10	₹ -	₹ -	0.0122377721%
1011	Providing and filling brick bats in soak pits all complete.	CUM	8	₹ -	₹ -	0.0061949946%
1012	Providing Autoclave Areated concrete blocks in cement mortar 1:4 (1 part cement 4 parts coarse sand) confirming to (IS: 2185 Pt-3) in walls, chambers etc. for all heights above finished floor level including raking out joints, curing, scaffolding etc. all complete (excluding plastering and painting) as per specification and drawing.	CUM	5	₹ -	₹ -	0.0201899078%
1100	<b>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.</b>					
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.					
b	50mm thick	SQM	73	₹ -	₹ -	0.0230614956%
1200	<b>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.</b>					
1201	Providing 18mm thick plaster in two layers outside the building/boundary wall in cement mortar as applicable upto 10m above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 1206) on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete					

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a	Cement Mortar 1:6	SQM	992	₹ -	₹ -	0.2187094036%
1202	Providing 12mm thick plaster internal/external surfaces of building/boundary wall in cement mortar as applicable above finished floor level (For height greater than 10m from FFL, extra over for additional height to be paid in Item No 1206) on walls finished to a smooth finish as per specification all complete.					
a	Cement Mortar 1:6	SQM	4927	₹ -	₹ -	0.8660410363%
1205	Providing 12mm thick plaster in walls, drains/culverts with a paste of neat cement @ 1kg/sqm and rubbed smooth with trowel etc. all complete.	SQM	1444	₹ -	₹ -	0.1770623202%
A1210	Providing 2mm thick neat cement finish using PPC conforming to IS 1489 (part-I) / OPC grade 43/53 over concrete base for flooring, paving, plastered surface, etc. including curing & cleaning and scaffolding complete.	SQM	125	₹ -	₹ -	0.0060365861%
1300	<b>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.</b>					
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	200	₹ -	₹ -	0.0050014192%
1304	Two or more coats of acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete.	SQM	200	₹ -	₹ -	0.0147505624%
1305	Providing and applying two or more coats of acrylic emulsion paint as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	1894	₹ -	₹ -	0.1878520969%
1312	Providing and applying 3 coats of water proof cement paint of approved make and color on exterior surface at all heights including material, labour, scaffolding, curing etc including primer coat complete as per specification.	SQM	100	₹ -	₹ -	0.0074356848%
1316	Providing and applying 2 mm thick plaster of paris punning on walls including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	3132	₹ -	₹ -	0.2623983708%
A1316	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth, complete."	SQM	100	₹ -	₹ -	0.0077629250%
1317	Providing and applying 2 mm thick white cement punning on walls including preparation of surface, staging, etc to achieve a smooth even surface all complete as per specification and as directed by engineer.	SQM	100	₹ -	₹ -	0.0082692547%
1319	Providing and applying two or more coats of Acrylic based weather coat paint of approved brand and manufacture and required shade over one coat of primer after necessary cleaning/ washing, preparing the surface using coir brush/ wire brush, sand paper, including filling of cracks with putty wherever required etc. all complete to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guidelines. The final finished coating shall be fungus resistant, UV resistant, water repellent and extremely durable with color fastness as per specification.	SQM	646	₹ -	₹ -	0.0478003995%
B1322	Providing and applying one coat of approved primer to timber or steel or plastered surface or other metal surface with ready mix paint of approved quantity including smoothening of surface by sand papering, etc complete.					
a	With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood	SQM	100	₹ -	₹ -	0.0045091297%
b	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works	SQM	100	₹ -	₹ -	0.0040712035%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
1323	Finishing walls with textured exterior paint of required shade: New work (Two or more coats applied @ 3.28 litres/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm)	SQM	50	₹ -	₹ -	0.0055616627%
1400	<b>FLOORING AND SKIRTING: Flooring and skirting at all level including base layer, labour, material (unless otherwise specified in BOQ/contract specification), equipments, transportation, handling, curing, polishing etc. at all level as per specification, drawings and as directed by engineer - in - charge.</b>					
1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron particles in flooring. Under layer of 38mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5 mm 20 well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix with approved quality metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	525	₹ -	₹ -	0.2536951765%
1404	Providing and laying interlocking M30 Grade concrete blocks in paving with approved colour and pattern and should be laid on the subbase and bedding of sand minimum 50mm thick as per specifications and recommendations of manufacturer.(inclusive of cost of cement for paver manufacturing)					
b	75mm	SQM	25	₹ -	₹ -	0.0155086278%
1413	Providing and laying 14 to16mm thick polished Granite stone of approved color and texture in flooring with brass/ stainless steel strips. Under bed shall average 35mm thk of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level. The granite stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry @3.3kg/sqm spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.	SQM	5	₹ -	₹ -	0.0086467773%
1416	Providing and laying vitrified ceramic tiles of polished variety of size 600x600/300x300 from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 minimum 20mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3Kg/sqm etc. all complete for following					
a	7mm thick tiles In flooring	SQM	1121	₹ -	₹ -	0.8545311278%
c	7mm thick tiles In skirting and dado upto specific height (300x150)	SQM	29	₹ -	₹ -	0.0229473328%
1417	Providing and laying vitrified ceramic tiles of matt finish of size 600x600mm from reputed / approved manufacturercomplete including underbed of cement mortar 1:3 minimum 20mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3Kg/sqm etc. all complete for following					
a	7mm thick tiles In flooring	SQM	74	₹ -	₹ -	0.0616394714%
c	7mm thick tiles In skirting and dado upto specific height	SQM	244	₹ -	₹ -	0.2103181336%
1427	Providing and fixing glazed ceramic tiles of approved color and design of size 200x300mm / 300x300mm in dado of approved size, projecting 6mm uniformly from adjacent plaster or wall finish. The mix for 20mm thick underbed plaster shall consist of 1part cement and 3 parts sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry @ 3.3kg/sqm including pigments, curing etc all complete for following thicknesses:					
b	7mm thick	SQM	13	₹ -	₹ -	0.0102867354%
1428	Providing and laying 3mm thick antistatic PVC flooring / skirting of approved shade,as per IS:3462 and laying as per IS:5318 all complete.	SQM	25	₹ -	₹ -	0.0149800961%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
1600	<b>FALSE CEILING: False ceiling including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, suspension system etc at all level as per specification, drawings and as directed by engineer - in - charge.</b>					
1601	Providing and fixing 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 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat (seamless).	SQM	100	₹ -	₹ -	0.0663835712%
1602	Providing, fixing and laying light weight mineral fiber tile false ceiling of minimum thickness 15 mm and exposed surface semi-perforated with depth of perforation as 4 mm and humid resistance of 95% RH and fire performance of class 0/1 as per BS 476 with metal suspension grid system with galvanized Tees of section 24 X 38 mm for main runners of approved colour and make as per specification including 50mm thick mineral wool insulation (density 48kg/cum) 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 @ 1.2m) grid shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. complete with cut-outs etc. The size of tiles shall be 600 X 600 mm or 600 X 1200 mm. Required MS channel shall be measured & paid extra under respective item unit rate.	SQM	1246	₹ -	₹ -	1.6068629657%
1800	<b>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.</b>					
a1801	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 200 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected sand/morrum 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	5967	₹ -	₹ -	8.7475963346%
1808	Laying of earthing mats/rods including risers, transportation from yard stores, loading, unloading, cutting to length, welding, protective painting of joints etc. all complete. (Excavation & Back filling shall be paid separately under respective item of earth work. Earthing mats/rods shall be supplied by BHEL free of cost)	MT	17	₹ -	₹ -	0.1470978997%
1809	Construction of below ground earthing system test pits as per drawing / sketches including concreting, reinforcement, formwork, providing & fixing GI strip etc as per drawing and specification (excavation & backfilling only will be paid under applicable BOQ items & cement/steel to be supplied by BHEL free of cost)	NO	1	₹ -	₹ -	0.0102015663%
1810	Construction of below ground earthing system test links as per drawing/ sketches including concreting, reinforcement, formwork, providing & fixing GI strip etc as per drawing & specification (excavation & backfilling only will be paid under applicable BOQ items & cement/steel to be supplied by BHEL free of cost)	NO	1	₹ -	₹ -	0.0067507078%
1811	Construction of below ground earthing system earth electrodes as per drawing and specification. ( Excavation and backfilling only will be paid under applicable BOQ items & steel shall be supplied by BHEL free of cost.)	NO	2	₹ -	₹ -	0.0032545467%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
1812	Construction of below ground earthing system - Earth connection and riser pig tails as per drawing and specification. ( Excavation and backfilling only will be paid under applicable BOQ items& steel shall be supplied by BHEL free of cost.)	NO	2	₹ -	₹ -	0.0029972273%
1813	Providing Earthing pit as per drawing with charcoal & salt, GI pipes, GI earth electrodes, GI wire, GI strips, brick chamber with covers including associated earthwork etc.all complete.	NO	1	₹ -	₹ -	0.0214553635%
1814	Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, providing & fixing GI strips/pipes, GI wires, covers etc as per drawing & specification including associated earthwork.	NO	1	₹ -	₹ -	0.0118197791%
A1837	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipments, tools, plants & machineries required for the job, all complete as per direction of Engineer-in-charge, upto 90 metre depth below ground level.					
a	All types of soil (upto 300mm dia)	RM	100	₹ -	₹ -	0.0427506574%
b	Rocky strata including Boulders (upto 300mm dia)	RM	50	₹ -	₹ -	0.0511950826%
A1839	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of requireddia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc.all complete, for all depths, as per direction of Engineer -in-charge.					
a	100 mm nominal size dia	RM	150	₹ -	₹ -	0.0609140240%
b	150 mm nominal size dia	RM	100	₹ -	₹ -	0.0479151664%
A1842	Supplying manpower services for various misc works					
a	Skilled	Man-days	10	₹ -	₹ -	0.0064027830%
b	Semi-skilled	Man-days	20	₹ -	₹ -	0.0106551974%
c	Un-skilled	Man-days	30	₹ -	₹ -	0.0136814184%
2100	<b>WATER SUPPLY: Water supply work including men, material (unless otherwise specified in BOQ/contract specification), equipment etc. at all level as per specification, drawings and as directed by engineer - in - charge.</b>					
2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck/body bib cocks including sockets, union, nuts etc all complete - 15mm nominal bore.	NOS	20	₹ -	₹ -	0.0131317456%
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	NOS	20	₹ -	₹ -	0.0116699781%
A2102	Providing and fixing in position of 15 mm dia PTMT Pillar Cock with approved colour & quality including necessary fittings, etc. complete as per direction of bhel engineer.	NOS.	15	₹ -	₹ -	0.0018886700%
2103	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality including all specials etc all complete for following sizes:					
a	25mm nominal bore.	NOS	5	₹ -	₹ -	0.0032829364%
b	50mm nominal bore.	NOS	5	₹ -	₹ -	0.0047416837%
A2103	Providing and fixing in position of 25 mm dia gun metal gate valve including all necessary fitting & fixture etc. complete as per standard specification.	NOS.	15	₹ -	₹ -	0.0056392814%
B2103	Providing and fixing in position of 40 mm dia gate valve including all necessary fitting & fixture etc. complete as per standard specification.	NOS.	13	₹ -	₹ -	0.0064869253%
2104	Providing and fixing GI pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete for internal works with GI sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc all complete for following sizes:					
a	15 mm nominal bore.	RM	163	₹ -	₹ -	0.0498196923%
b	20 mm nominal bore.	RM	163	₹ -	₹ -	0.0545456710%
c	25 mm nominal bore.	RM	125	₹ -	₹ -	0.0495309630%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
d	50 mm nominal bore.	RM	125	₹ -	₹ -	0.0662929658%
A2104	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes(Including removal of old damaged pipes if required) , having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Note: Prior approval of sample and brand by BHEL Engineer-In-Charge is necessary before use.					
a	15mm dia	RM	163	₹ -	₹ -	0.0282377228%
b	20mm dia	RM	163	₹ -	₹ -	0.0329833931%
c	25mm dia	RM	125	₹ -	₹ -	0.0303188387%
d	32mm dia	RM	125	₹ -	₹ -	0.0391679681%
e	40mm dia	RM	25	₹ -	₹ -	0.0106151800%
f	50mm dia	RM	25	₹ -	₹ -	0.0141065089%
g	100mm dia	RM	25	₹ -	₹ -	0.0406875128%
h	150mm dia	RM	25	₹ -	₹ -	0.0848485161%
2105	Providing and fixing GI pipes class B complete for external work with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete for following sizes:					
a	15 mm nominal bore.	RM	63	₹ -	₹ -	0.0148031136%
b	20 mm nominal bore.	RM	63	₹ -	₹ -	0.0166297188%
c	25 mm nominal bore.	RM	25	₹ -	₹ -	0.0081393869%
d	50 mm nominal bore.	RM	25	₹ -	₹ -	0.0114917875%
e	80 mm nominal bore.	RM	25	₹ -	₹ -	0.0143647343%
2106	Providing and fixing 610mmx453mmx6mm thk approx size. mirror from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets with CP screws etc all complete.	NOS	10	₹ -	₹ -	0.0093142372%
2107	Providing and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc all complete.	NOS	5	₹ -	₹ -	0.0029205147%
2108	Providing and fixing 25 mm diameter stainless steel towel rails (600mm X 25mm) with C.P. mounting brackets all complete.	NOS	10	₹ -	₹ -	0.0083356987%
2109	Providing and fixing 20mm dia chromium plated M.S. pipes wall mounted towel rod with C.P. Brackets etc all complete.	NOS	5	₹ -	₹ -	0.0033010575%
2110	Providing and fixing C.P. Soap holder mounted with C.P. screws etc all complete.	NOS	5	₹ -	₹ -	0.0026064159%
2111	Providing and fixing stainless steel / C.P. liquid soap dispenser. Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc all complete.	NOS	10	₹ -	₹ -	0.0042403337%
2112	Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. all complete.	NOS	5	₹ -	₹ -	0.0024735280%
2113	Providing and fixing chromium plated brass shower rose 100mm dia with 15 or 20 mm inlet dia shower arm all complete.	NOS	5	₹ -	₹ -	0.0023708418%
2114	Providing & fixing in position P.V.C. water tank of Sintex 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	500 litres capacity	NOS	2	₹ -	₹ -	0.0100028384%
b	1000 litres capacity	NOS	1	₹ -	₹ -	0.0100028384%
c	2000 litres capacity	NOS	1	₹ -	₹ -	0.0200056768%
d	5000 litres capacity	NOS	4	₹ -	₹ -	0.2000567678%
A2116	Providing & fixing in position of CI vent pipe of dia. 100mm (approx. ht. 3m ) in septic tank. Rate to include all necessary fitting & fixture, labour etc.	RM	28	₹ -	₹ -	0.0194820983%

**PROJECT: LSTK-1 & LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.**  
**BOQ CUM RATE SCHEDULE (PRICE BID)**

**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
A2117	Providing & fixing steel hangers(min 5 pins) for hanging clothes on walls, behind doors, etc as per direction of BHEL engineer.	Nos	10	₹ -	₹ -	0.0011005743%
2200	<b>SANITARY: Sanitary work 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.</b>					
2201	Supply and fixing glazed vitreous china Wash Basin of approved make 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	15	₹ -	₹ -	0.0511367931%
2202	Providing and fixing approved vitreous china laboratory basin/sink of size 550x400x200mm conforming to IS:2556 (part-5) with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 32mm, 32mm CP brass waste coupling and 32mm CP brass bottle trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	3	₹ -	₹ -	0.0184835057%
2203	Providing and fixing stainless steel kitchen sink of size 610x510x200mm with drainboard conforming to IS: 13983 including all fittings etc. all complete.	EACH	5	₹ -	₹ -	0.0277222384%
2204	Providing and fixing colour glazed vitreous china European type water closet conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, 2 way bibcock with health faucet necessary C.P connections etc all complete.					
a	Floor mounted	EACH	15	₹ -	₹ -	0.1003455029%
b	Wall mounted	EACH	1	₹ -	₹ -	0.0107989580%
2205	Providing and fixing colour glazed vitreous indian type Orissa pattern (580x440mm) water closet conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, 2 way bibcock with health faucet necessary C.P connections etc all complete.	EACH	5	₹ -	₹ -	0.0263208746%
2206	Providing and fixing white flat back glazed vitreous china urinals of size 370x315x620 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	13	₹ -	₹ -	0.1990915181%
2208	Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following.					
a	200mm dia	RM	155	₹ -	₹ -	0.1231176651%
b	300mm dia	RM	125	₹ -	₹ -	0.1596165486%
c	450mm dia	RM	55	₹ -	₹ -	0.0895332561%
d	600mm dia	RM	45	₹ -	₹ -	0.0901886353%
2209	Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following.					
b	250mm dia	RM	25	₹ -	₹ -	0.0197670825%
c	300mm dia	RM	25	₹ -	₹ -	0.0223040343%
d	450mm dia	RM	125	₹ -	₹ -	0.1568228815%
Af	600mm dia	RM	57	₹ -	₹ -	0.0967691257%
2211	Providing and fixing C.I Manhole heavy duty cover of size 600mmx450mm including frame from reputed manufacture etc. all complete.	EACH	2	₹ -	₹ -	0.0096645782%
2212	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	2	₹ -	₹ -	0.0102686143%

**PROJECT: LSTK-1 & LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.**  
**BOQ CUM RATE SCHEDULE (PRICE BID)**

**SCOPE OF WORK:-**

Enabling Works Package.Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2213	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber(Clay Brickwork in 1:6 mortar, 12mm plaster in 1:6 mortar & 1:2:4 Cement Concrete) 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	15	₹ -	₹ -	0.0201778271%
2215	Providing and fixing 100mm heavy duty UPVC floor traps with 100 mm inlet and 100 mm outlet & C.P jalli all complete.	EACH	5	₹ -	₹ -	0.0065024490%
2218	Providing and fixing white vitreous urinal partitions of size 675x325x85mm all complete.	EACH	5	₹ -	₹ -	0.0110750025%
2221	Providing, laying spun CI pipes with conforming to IS 1536 complete for following. (Excavation, backfilling, concrete to be paid seperately)					
b	100mm dia	RM	5	₹ -	₹ -	0.0055480719%
2222	Providing and fixing HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc. all complete.					
a	Upto 75 mm dia	RM	10	₹ -	₹ -	0.0032074319%
b	100 mm dia	RM	10	₹ -	₹ -	0.0039020734%
A2224	Providing at working site, carrying and lowering into trenches, laying to proper alignment, level and grade, jointing with cm (1:1) and testing of joints etc. of the following size of salt glazed stoneware pipe inclusive of all necessary specials tarred hemp yarn and all jointing materials complete as per standard specifications including all necessary excavation ,backfilling,disposal of surplus earth ,lead and lift as per site conditions. Rate shall include cost of all materials, labour charges and incidental charges etc. complete.					
a	100mm dia stoneware pipeline including all specials complete.	RM	225	₹ -	₹ -	0.0602888466%
2400	<b>ROAD WORKS: Road works including all labour, material (unless otherwise specified in BOQ/contract specification), equipment etc. as per specification, drawings and as directed by engineer - in - charge.</b>					
2401	Preparation of sub grade by excavating earth to required depth for all types of soil/ rock, dressing to camber and consolidating the base including making good the undulation etc and disposal of surplus earth within a lead upto 1 km etc. all complete.	CUM	7520	₹ -	₹ -	0.2952528626%
2403	Providing, stacking & laying granular morrum for shoulder including watering, compaction with road roller to required camber etc all complete.	CUM	1875	₹ -	₹ -	1.2220406049%
2404	Providing & laying water bound macadam sub base course in layers of required thickness with crushed stone aggregates 90 to 40 mm down size (IRC 19 - grading -1), 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	1205	₹ -	₹ -	1.9120975255%
2405	Providing & laying water bound macadam base course in layers of required thickness with stone aggregate 63mm to 40mm size(IRC 19 - grading -1), 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	903	₹ -	₹ -	1.4639733858%
2406	Providing & Laying water bound macadam base course with stone aggregate 50mm to 20mm size stone(IRC 19 - grading -1) screening & binding material including screening, sorting, spreading to template & consolidation with road roller including carriage spreading & consolidation of blinding material moorum etc all complete.	CUM	911	₹ -	₹ -	1.5055576495%
A2406	Construction of granular sub-base (GSB) by providing close graded material conforming to specification, mixing in a mechanical mix plant at OMC. GSB shall be provided in two layers of 75mm each. Each Carriage of mixed material by tippers to work site for all lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density complete as per specification and direction of EIC including supply of all material, T&P, labour etc all.	CUM	1022	₹ -	₹ -	1.8579011081%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

## SCOPE OF WORK:-

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
<b>H</b>	<b>HORTICULTURE WORKS</b>					
H-1	Grassing with selection no. 1 grass including watering and maintenance of the lawn for 60 days or more till the grass forms a thick lawn, free from weeds and fit for mowing including supplying good earth, if needed etc. all complete as directed by BHEL. (1/C)					
H-1.1	In rows 5 cm apart in both directions	SQM	1625	₹ -	₹ -	0.0500594947%
H-1.2	With grass turf	SQM	275	₹ -	₹ -	0.0070596723%
H-2	Providing and laying brick on edge flooring with bricks of class designation 7.5 on a bed of 12mm cement mortar, including filling the joints with same mortar with common burnt clay non modular bricks:					
H-2.1	1:4 (1 cement:4 coarse sand)	SQM	325	₹ -	₹ -	0.1543010306%
	<b>TOTAL PACKAGE-A</b>					<b>49.5984837485%</b>
<b>PACKAGE-B</b>	<b>MOVABLE ITEMS</b>					
<b>900</b>	<b>DOORS &amp; 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.</b>					
901	Providing and fixing wooden frame conforming to IS 4021 made of best quality seasoned CP teakwood free from large or loose knots, cracks or other defects including sand paper smoothening, hold fasts, beading, primer and finish painting / polishing etc. all complete with proper wood joinery, accurately set to required lines or levels and rigidly secured in place. (Finish painting / polishing paid separately)	CUM	3	₹ -	₹ -	0.4211466778%
902	Providing and fixing teak wood frame panel door shutter as per IS 1003 with 35 mm x 150 mm vertical rail & 35mm x 125 mm horizontal rail and 12 mm thick interlocked panels of teakwood with proper wood joinery including beading, preparation of working drawings, godrej or equivalent make mortice lock with handels on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fitting shall be anodised aluminium color dyed), screws, primer and finish painting / polishing etc. all complete. (Finish painting / polishing paid separately)	SQM	3	₹ -	₹ -	0.0148846584%
A903	Providing, fitting and fixing solid core flush door shutter as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldehyde synthetic resin, particle 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 included in the item)	SQM	13	₹ -	₹ -	0.0459589350%
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	13	₹ -	₹ -	0.1137037620%
908	Providing and fixing steel windows/ventilator with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision including all fittings, metal beadings, hold fasts, shop and final painting, glazing etc. all complete. (Glazing shall be paid separately)					
a	Openable type	SQM	10	₹ -	₹ -	0.0177767834%
b	fixed type	SQM	5	₹ -	₹ -	0.0056960607%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

## SCOPE OF WORK:-

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
909	Providing and fixing anodised aluminium work 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-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.	Kg	1242	₹ -	₹ -	0.5619094465%
911	Providing and fixing of door closers as per IS 3564 ,of approved make & quality all complete of following type :					
a	Over head hydraulic door closures	Each	17	₹ -	₹ -	0.0220467149%
b	Floor mounted Hydraulic door closers	Each	7	₹ -	₹ -	0.0191962684%
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	210	₹ -	₹ -	0.5892070475%
c	Electrically operated	SQM	210	₹ -	₹ -	0.7544894551%
914	Providing and fixing PVC doors (25mm thk double skin) of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	18	₹ -	₹ -	0.0321286820%
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.					
c	5.5 mm thick clear float glass	SQM	155	₹ -	₹ -	0.1832253009%
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	102	₹ -	₹ -	0.1034460203%
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	10	₹ -	₹ -	0.0209177713%
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	10	₹ -	₹ -	0.0314219597%
A919	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.					
a	Fixed to steel windows by welding	KG	125	₹ -	₹ -	0.0102928600%
b	Fixed to openings /wooden frames with rawl plugs screws etc.	KG	125	₹ -	₹ -	0.0111911402%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

**SCOPE OF WORK:-**

Enabling Works Package Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
1500	<b>ROOFING / SIDE CLADDING: Roofing / side cladding work including all labour, material (unless otherwise specified in BOQ/contract specification), equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at all level as per specification, drawings and as directed by engineer - in - charge.</b>					
1505	Designing, providing, Erection and fixing profiled External Cladding sheet manufactured out of 0.55 mm TCT(Total Coated Thickness) of permanently colour coated zincalume steel (150gsm. zinc-aluminium alloy coating total of both sides as per AS 1397:1993) having 300MPa yield strength. The colour coating shall comprise of 20 microns finish coat over a 5 micron primer coat on the exposed side and a back coat of 5 micron over a primer coat of 5 micron on reverse side.The sheet shall have 500 mm cover width, 47mm height crests at 250mm centres with special male/female side laps and anti-siphoning features to prevent leakage. The sheet shall be fixed with the help of concealed compatible interlocking clips and wafer head zinc coated self drilling fastners/screws 4.2 X 25mm long on to the sub-girts. The clips shall be concealed and no fastners are to penetrate the external sheeting, all complete as per specification.					
a)	final painting with Silicon Modified Polyester(SMP)	SQM	5250	₹ -	₹ -	3.7546886129%
A1517	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with 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. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineerin-charge. The sheet shall be fixed using self drilling /self tappingscrews of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	SQM	7776	₹ -	₹ -	3.4694279577%
B1517	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 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 :					
a	Ridges Plain (500 - 600mm)	RM	420	₹ -	₹ -	0.1350546272%
b	Flashings/ Aprons ( upto 600 mm)	RM	210	₹ -	₹ -	0.0615971889%
c	North Light Curves	RM	105	₹ -	₹ -	0.0346357340%
d	Barge Board (upto 300 mm)	RM	210	₹ -	₹ -	0.0572716861%
e	Crimp Curve	SQM	1103	₹ -	₹ -	0.3309606097%
f	Gutter (600 mm over all girth)	RM	840	₹ -	₹ -	0.6665587069%
1518	Supply & fixing FRP (fibre reinforced plastic) sheets 2 mm thick including GI hooks/ J or L bolts, nuts, washers, bitumen washers etc. complete including overlap 100mm.	SQM	840	₹ -	₹ -	1.1319878778%

**PROJECT: LSTK-1 & LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.**  
**BOQ CUM RATE SCHEDULE (PRICE BID)**

**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
A1519	Designing, providing and fixing Insulated Sandwich Panels 60 mm thick (Main structural walls), of desired height, suitable width panels with colour coated GI sheet of 0.5 mm thickness on inner and outer side using pre-coated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by engineer-in-charge) 0.50 mm (+ 0.05 %) total coated thickness with 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. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation. insulation shall be done using 60 mm thick PUF of 38 kg /m3 (min.) sandwiched between the sheets. Insulated sandwich panels shall be pre-fabricated and supplied at site for installation. The Sandwich Panels shall be joined together by tongue and groove method, joints shall be sealed with silicon sealant or other suitable sealant to ensure 100% leak proof. The outer framing structure shall be fabricated with ISMC 75x40x3mm or as per approved design, MS "T" welded for securing panels. the above columns will be grouted to the plinth beam / floor by means of expansion fasteners. The entrance will be provided with 1no-portico made up of puf panels should have an aesthetic look of size min. 4m x 3m. Note: Structural steel work for outer frame shall be paid extra under the relevant item.	SQM	423	₹ -	₹ -	0.3261818775%
1700	<del>RAIN WATER DOWN TAKE PIPES: Rain water down take pipes at all level including all labour, material (unless otherwise specified in BOQ/contract specification), transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc as per specification, drawings and as directed by engineer - in - charge.</del>					
1705	Providing and fixing UPVC down take pipes of 110mm diameter- Class 3 as per IS:4985 all complete.	RM	959	₹ -	₹ -	0.5439351433%
1800	<del>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.</del>					
A1836	Supply & fixing of Turbo Vent 600 mm Dia. all complete as per specification	NOS.	47	₹ -	₹ -	0.0731602526%
A1840	Supply, delivery, and complete installation of an electrical submersible pump (minimum 3 HP) of approved make such as Crompton Greaves, CRI Pumps, or equivalent, as per approval of BHEL, including all necessary accessories, starter/console panel, PVC-coated sling wire, submersible cable of required length, and 1/4" dia HDPE suction pipe (approx. 120 ft length). The work shall include mounting, alignment, connection to power supply, testing, commissioning, and demonstration of proper operation, ensuring efficient and reliable pumping performance. All materials and components shall conform to approved specifications, and installation shall be executed as per the directions and satisfaction of the Engineer-in-Charge, complete in all respects.	EACH	4	₹ -	₹ -	0.0243281594%
A1841	Extra over initial length of HDPE suction pipe beyond 120 ft.	PER FEET	75	₹ -	₹ -	0.0036604590%
A1844	Providing, supply, delivery, and complete installation of a pitless type weighbridge of 100 MT capacity, including weighbridge platform, load cells, junction boxes, indicator panel, steel structure, ramps, cabling, mounting accessories, and associated computer system with printer for data recording and reporting, as per manufacturer's specifications and approved design. The work includes alignment, calibration, testing, and commissioning, ensuring accurate and reliable operation. All equipment shall be of approved makes such as Avery, Mettler-Toledo, Vishnu, or equivalent for the weighbridge, and HP, Dell, or equivalent for computer and printer, and installation shall be carried out under the direction and satisfaction of the Engineer-in-Charge. Note: The cost of civil foundation works shall be paid separately under the relevant BOQ items; this item includes supply, installation, and commissioning only, complete in all respects.	NOS.	1	₹ -	₹ -	0.8977359077%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

**SCOPE OF WORK:-**

Enabling Works Package Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
A1845	Design, manufacturing, supply, delivery to site, and complete installation of a field porta cabin as per approved specifications and drawings, including MS steel structural framework with primer and finish paint, insulated wall and roof sandwich panels, flooring with pre-laminated/plywood base and anti-slip vinyl/laminate finish, doors and windows with aluminium/glass frames, locks and accessories, furniture, concealed electrical wiring with sockets, switches, distribution board, lighting, fans, and earthing, ventilation/exhaust fans or small HVAC units where required, internal and external painting, and finishing works. The work shall also include transportation, loading, unloading, site assembly, alignment, anchoring, and miscellaneous accessories such as door stoppers, window fittings, sealants, and signage. All materials, workmanship, and installation shall conform to approved makes and specifications, and the work shall be executed as per the instructions and satisfaction of the Engineer-in-Charge, complete in all respects.	NOS.	6	₹ -	₹ -	2.0086949841%
A1846	Providing, delivery, and complete installation of bio-toilet units of approved makes such as ECOSAN, Shital, or equivalent, near all modular worker sheds/accommodation, including prefabricated toilet superstructure, water storage tank, bio-digester unit, inlet and outlet piping, ventilation, doors, locks, and fittings as per approved specifications. The work shall also include site preparation, leveling, foundation work, plumbing connections, waste management system, and finishing, ensuring the bio-toilet is fully functional, hygienic, and safe for use. All materials, components, and workmanship shall be of approved quality, executed as per the directions and satisfaction of the Engineer-in-Charge, complete in all respects.	Nos	8	₹ -	₹ -	0.2813600315%
2000	<b>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.</b>					
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 conforming 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 separately under item 2007/2008)	RM	250	₹ -	₹ -	0.4290166646%
A2001	Providing and fixing G.I. chain link fabric fencing (Made of G.I. wire of dia 4 mm) of required width in mesh size 50x50 mm including strengthening with 2 mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-charge.	Sqm	200	₹ -	₹ -	0.1012611492%
2008	Supply, fabrication and fixing of mild steel posts for fencing including painting etc all complete.	MT	3	₹ -	₹ -	0.1783259638%
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	4	₹ -	₹ -	0.2718935772%

**PROJECT: LSTK-1 & LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.**  
**BOQ CUM RATE SCHEDULE (PRICE BID)**

**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2011	Fencing with With G.I. barbed wire & angle iron post placed at required distance embedded in cement concrete blocks, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with horizontal lines and two diagonals interwoven with horizontal wires, of barbed wire weighing 9.38 kg per 100 m (minimum), between the two posts fitted and fixed with G.I. staples, turn buckles etc. complete. (Cost of posts, struts, earth work and concrete work to be paid for separately). Payment to be made per metre cost of total length of barbed wire used.	RM	2250	₹ -	₹ -	0.0300356968%
2012	Providing and fixing of precast boundary wall comprising minimum M-25 grade Precast RCC panels of 50 mm thickness and size approx. 1800 mm × 300 mm, supported on precast concrete columns of size 250 mm × 250 mm, M-25 grade. Columns shall be embedded to a minimum depth of 600 mm below ground level. The height of the boundary wall shall be 2.1 m. Scope shall also include supplying and fixing of 600mm high concertina on top of boundary wall including barbed wires, clips, anchors, accessories etc. all complete. Concertina shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on barbed wire by means of clips at 1m interval including structural post of angles (ISA 50x50x6) for concertina fencing all complete as per BHEL Engineer-in-Charge instruction and technical specifications. The quoted rate shall be inclusive of all labour, materials, tools & plants, transportation, loading, unloading, placing and fixing of precast columns/panels, alignment, jointing, and all other incidental charges required for the complete execution of the work as directed by the Engineer-in-Charge. (Excavation & backfilling shall be paid seperately as per relevant BOQ items)	RM	4000	₹ -	₹ -	7.6702682907%
2200	<b>SANITARY: Sanitary work 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.</b>					
2216	Providing and installing approved brand double tap water cooler of 80 L cooling capacity all complete.	EACH	2	₹ -	₹ -	0.0703315514%
2217	Providing and installing approved brand double tap water cooler of 150 L cooling capacity all complete.	EACH	2	₹ -	₹ -	0.0981172136%
2223	Providing and fixing vertical wall mounted water geysers/heaters(minimum 5 star rating) of required capacity including all connections & fittings(angular stop cock and brass connection pipes, etc.) all complete as per specification.					
a	15 Litres	Each	2	₹ -	₹ -	0.0122589134%
b	25 Litres	Each	2	₹ -	₹ -	0.0159057815%
2224	Supply, installation, testing and commissioning of Zincalume tank fabricated with wall panels as per manufacturer and relevant IS & BIS specification of 100kL capacity, 2m/3m height and suitable diameter including external ladder, nozzle, wall manhole, preparation of civil foundation drawing, nut-bolt, etc. nozzle/sleeves as required in tender drawing. Complete in all respects as required and as per direction of the Engineer in charge. Shop drawing to be submitted for review before fabrication work. (Cost of Civil works shall be paid seperately under relevant BOQ items).	Each	1	₹ -	₹ -	0.4258132239%
2225	Supply, installation, testing, and commissioning of following suitable capacity horizontal booster pressure pump from a reputed manufacturer such as Suguna, CRI, Kirloskar, Shakti, Sharp, or Crompton. The scope includes all required accessories, starter, distribution board (DB), cables, and associated materials for complete functionality. Warranty documents/cards for the supplied equipment shall be submitted to BHEL."					
a	10 HP horizontal booster pressure pump	Each	1	₹ -	₹ -	0.0508915605%
b	5 HP horizontal booster pressure pump	Each	1	₹ -	₹ -	0.0305349363%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2226	Providing and fixing suitable water meter (Maximum Working Pressure 16 bar; Maximum Liquid Temperature 60°C; Connection Flanges according to ISO, BS 10, American Water works Association (AWWA) or others; Register water consumption in cum) on domestic water inlet pipelines upto 150mm.	Nos	2	₹ -	₹ -	0.0135739930%
2227	Supply, Installation, Testing and Commissioning (SITC) of a 4000 LPH Industrial Reverse Osmosis (RO) Water Treatment Plant, comprising a raw water pumping system with 3 HP centrifugal pump, dual-stage pretreatment consisting of 2172 FRP multimedia and activated carbon filters with side-mount valves, quartz sand and activated carbon media, followed by 20" micron filtration using cartridge housings and wound filters. The scope further includes complete chemical dosing systems with antiscalant and pre/post chlorination dosing pumps and tanks, antiscalant 5020 chemicals, and all associated accessories. The high-pressure RO section consists of an SS skid-mounted system equipped with a LEO high-pressure pump, 8080 membrane housings, and four GE Suez 8040 RO membranes, integrated with required UPVC/SS piping, PU fittings, valves, and interconnections. Instrumentation includes flow meters, pressure gauges, low-pressure and high-pressure switches, and float switches for automation. A relay-based control panel with MCBs, contactors, overload protection, auto/manual operation, and electrical interlocking ensures safe and automatic plant operation. The scope also covers treated water storage and handling through a 5000-litre plastic tank and a 3000-litre SS tank, including a complete distribution system. All necessary mechanical, electrical, and instrumentation work—such as piping, wiring, supports, testing, flushing, sanitization, and commissioning—are included, along with operator training, documentation, and performance demonstration.	Set	1	₹ -	₹ -	0.3708679488%
2300	<b>STRUCTURAL WORKS: Structural steel works including all labour, material (unless otherwise specified in BOQ/contract specification), equipments unless otherwise specified, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge.</b>					
2301	Supply, fabrication at site/shop, erection & alignment of structural steel of grade E250 in Rolled/built up section/combination of both at BHEL site conforming to IS:2062/tubular sections in columns, beams, struts, ladders, brackets, stiffeners, stub columns, truss, bracings, cleats, base plates, splice plates, gussets, end plates, stairs, stringers, treads, landings, etc. including 2 coats of red oxide zinc-chromate primer connection design & preparation of fabrication drgs, straightening, cutting, bending, grinding, machining, drilling, welding, electrodes and other consumables, alignment, assembly, edge preparation, inspection of welds, visual inspection, rectification and correction of defective welding works, production test plate, inspection and testing, protection against damage in transit, stability of structures,temporary structures (weight of temporary structures not payable), etc all complete as per specification and drawing. Payment Breakup: 1. On Completion of Fabrication & Supply at site - 70% 2. On Completion of Erection, Alignment, Welding/Bolting - 30%	MT	195	₹ -	₹ -	12.3125155192%
2304	Extra over ST No. 2301 for providing and applying two coats of synthetic enamel paint with minimum 50 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 110 microns including protection and cleaning, scaffolding etc. all complete.	MT	195	₹ -	₹ -	0.3910529936%
2311	Providing and fixing in position of permanent mild steel bolts (class 4.6 as per IS : 1367 and grade 'C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete.	KG	977	₹ -	₹ -	0.0879313522%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

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**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
2312	Providing and fixing in positing of high strength structural bolts (of property class 8.8 and product grade 'C' as per IS: 1367) and conforming to IS: 3757 and high strength structural hardened and tempered nuts (of property class 'B' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete.	KG	391	₹ -	₹ -	0.0406226381%
2320	Supply, fabrication and fixing of stainless steel pipe hand railing conforming to SS 409 of 32 mm/40 mm dia including transportation, loading/unloading etc. all complete..	MT	1	₹ -	₹ -	0.1794253096%
FM	<b>FURNITURE AND FURNISHING:</b> <b>Modular Furnishing: Providing mastro type table for site incharge, conference hall table, modular office type cubicle including cabins, tables, racks, chairs of approved make required as per schematic drawings/ sepcifications and as directed by Engineer-In-charge etc. all complete.</b>					
FM-1	Supply, delivery, and installation of Mastro-type Site Incharge Table, overall size approximately 1800mm (L) x 900mm (W) x 750mm (H), fabricated with 25mm thick pre-laminated MDF board top having 2mm PVC edge banding, supported on powder-coated mild steel frame structure with 18mm thick pre-laminated MDF modesty panel; including fixed side return table of size approx. 1200mm x 450mm x 750mm (H) with one drawer and open shelf combination, made of 18mm pre-laminated MDF board with matching finish and securely fixed to the main table; and mobile pedestal unit of size approx. 400mm x 450mm x 650mm (H) made of 18mm pre-laminated MDF, consisting of three drawers (stationery, utility, and filing) with central locking, heavy-duty telescopic channels, and four castor wheels (two lockable). The entire assembly shall have a uniform Mastro light oak/teak shade (or approved equivalent) finish, stainless steel/chrome hardware, and black or grey powder-coated MS frame. The item shall include complete supply, installation, alignment, and finishing at site, ensuring all edges are smooth and edge-banded, joints are stable, drawers operate smoothly, and surfaces are scratch-resistant. The unit shall be delivered complete in all respects with a minimum one-year warranty for materials and workmanship	NOS.	1	₹ -	₹ -	0.0295736092%
FM-2	Supply, delivery, and installation of conference hall table with a minimum seating capacity of 22 persons, made of high-quality engineered wood or laminated particle board, featuring sturdy tabletop, cable management provisions, modesty panels, and durable supporting framework. The table shall be designed for ergonomic seating, ease of movement, and professional aesthetics, with approved make such as Nilkamal, Godrej, Featherlite, or equivalent. The work includes delivery, assembly, installation, and finishing at site, complete with all accessories, as per the directions and satisfaction of the Engineer-in-Charge.	NOS.	1	₹ -	₹ -	0.1037975694%
FM-4	Providing and fixing modular office type cubicles including part cabins of size 1800mm x 750mm complete with pedestal, keyboard tray, CPU trolley and all necessary accessories as per the finalised furniture layout drawing. The partition shall be of 45mm thick aluminium panel, fully powder coated in approved shade and incorporating a double raceway system for electrical and data cabling. The panel shall be finished with 25mm thick pre-laminated particle board having 2mm PVC edge banding, with the lowest section from floor level up to 2'-5" in particle board and the top section of 1'-8" height in upholstered pin-up board. The worktop shall be of 25mm thick pre-laminated particle board with 2mm edge banding, supported on powder-coated MS brackets, and provided with cable manager/grommet holes. Each cubicle shall include a movable three-drawer pedestal (box, box, file type) with central locking and telescopic channels, a metal keyboard tray with mouse pad, and a movable CPU trolley with lockable castors. All hardware fittings shall be of approved make such as Hettich, Hafele, or equivalent. All aluminium profiles shall have a minimum powder coating thickness of 60-80 microns. Installation shall be carried out as per approved drawings, ensuring proper alignment, level, and workmanship to achieve a neat and professional finish. The item shall be measured and paid per complete cubicle unit including all accessories and fittings as specified above.					

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

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**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
FM-4.1	4-seater cubicle (workstations with shared partitions and individual accessories as above)	NOS.	8	₹ -	₹ -	0.7263896941%
FM-4.2	2-seater cubicle (shared partition and individual accessories as above)	NOS.	12	₹ -	₹ -	0.6772936371%
FM-4.3	1-seater cubicle (individual workstation with all accessories as above)	NOS.	4	₹ -	₹ -	0.1337577617%
FM-5	Site Incharge premium chair — executive high-back ergonomic with headrest, adjustable arms, synchro-tilt, mesh/leatherette, chrome base, heavy-duty mechanism	Nos.	2	₹ -	₹ -	0.0171063033%
FM-6	Chair for senior executive — executive high-back, leatherette, heavy-duty mechanism, chrome base	Nos.	15	₹ -	₹ -	0.0771958180%
FM-7	Chairs for executive & conference hall — mid-back revolving, cushioned seat & back	Nos.	100	₹ -	₹ -	0.4808127632%
FM-8	Chairs for visitors — cantilever base, cushioned seat/back, chrome frame	Nos.	30	₹ -	₹ -	0.1036526007%
FM-9	Three-seater sofa — wooden frame, high-density foam, fabric/leatherette upholstery (~1800mm)	Nos.	2	₹ -	₹ -	0.0320863995%
FM-10	Teapoy table — wooden/metal frame with 12mm glass top and lower shelf (~900×450×450mm)	Nos.	2	₹ -	₹ -	0.0214553635%
FM-11	L-type executive table (4½'×2' or 4½'×1½') — 25mm PLPB top, edge banding, side return, drawers	Nos.	15	₹ -	₹ -	0.2877628145%
FM-12	Office table (4½'×2') — pre-laminated top, modesty panel, drawer pedestal	Nos.	4	₹ -	₹ -	0.0440704764%
FM-13	Office running table with centre partition (4'×2') — worktop + 45mm centre partition, raceway provision	Nos.	20	₹ -	₹ -	0.4001135356%
FM-14	Vertical blinds — polyester slats, aluminium headrail, approved shade/profile	Sqm	60	₹ -	₹ -	0.0322529926%
FM-15	Plain cupboards — 1800mm H × 900mm W × 450mm D, 18mm PLPB, shelves, lockable shutters	Nos.	6	₹ -	₹ -	0.0710346494%
FM-16	Vertical filing cabinets — 4 drawers, CRCA steel 0.8mm, powder coated, telescopic channels	Nos.	6	₹ -	₹ -	0.0694399940%
FM-17	1200mm high glass hinged door units — PLPB body with glass shutters, shelves inside	Nos.	4	₹ -	₹ -	0.0539283461%
FM-18	Supply, delivery, and installation of office table of Nilkamal or equivalent approved make, made of pre-laminated particle board, featuring a durable tabletop, lockable drawer, shutter compartment with modesty panel, shelf, and footrest, designed for ergonomic office use, including all materials, accessories, transportation, loading, unloading, and placement at site, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	1	₹ -	₹ -	0.0059044532%
FM-19	Supply, delivery, and installation of mid-back office chair of Nilkamal or equivalent approved make, featuring a mesh back with soft fabric upholstery, metal powder-coated base, heavy-duty twin-wheel nylon castors, reclining push-back mechanism, and effortless height adjustment, designed for ergonomic comfort and durability, including all materials, accessories, transportation, loading, unloading, and placement at site, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	2	₹ -	₹ -	0.0056682751%
FM-20	Supply, delivery, and installation of high-quality, ergonomically designed plastic chair with cushioned seat and backrest of Nilkamal, Supreme, Cello, or equivalent approved make, manufactured from durable virgin-grade plastic of approved colour and finish, mounted on a sturdy frame suitable for long-duration seating, including all materials, fittings, accessories, transportation, loading, unloading, placement at site, and all incidental charges, complete in all respects as per manufacturer's specification and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	5	₹ -	₹ -	0.0094471251%
FM-21	Supply, delivery, and installation of 5-seater sofa with cushions and matching center table of Nilkamal/Godrej/Featherlite or equivalent make, including all materials, accessories, labour, transportation, loading, unloading, placement at site, and all incidental charges, complete as per the directions and to the satisfaction of the Engineer-in-Charge.	Set	2	₹ -	₹ -	0.0472356257%
FM-22	Supply, delivery, and installation of a 6-seater dining set comprising one dining table and six chairs of Nilkamal, Godrej Interio, Durian, or equivalent approved make, with the dining table having an engineered wood tabletop supported on a rubberwood base and legs, and each chair provided with a backrest, MDF seat frame, and rubberwood base frame, of approved design, colour, and finish, including all materials, fittings, accessories, labour, transportation, loading, unloading, placement at site, and all incidental charges, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Set	1	₹ -	₹ -	0.0236178129%

**PROJECT: LSTK-1 & LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.**  
**BOQ CUM RATE SCHEDULE (PRICE BID)**

**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
FM-23	Supply, delivery, and installation of RO Domestic Water Purifier of Kent, Aqua Grand, or equivalent approved make, with RO + LED UV + High TDS Membrane + TDS Control, suitable for treating high fluoride or chemically contaminated water, having a discharge capacity of 20 LPH and a minimum storage capacity of 8 liters, including all materials, fittings, accessories, electrical connections, transportation, loading, unloading, installation, testing, and commissioning, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	2	₹ -	₹ -	0.0179495378%
FM-24	Supply, delivery, and installation of Fly Catcher/Insect Killer Machine of 40W capacity equipped with UV lamps for effective insect control, housed in a corrosion-resistant metal body with a protective outer grill and removable collection tray, suitable for indoor use, of approved make such as Godrej, Osho, Eco-Lite, or equivalent, including all necessary materials, accessories, electrical connections, labour, transportation, loading, unloading, installation, testing, and commissioning, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	2	₹ -	₹ -	0.0034009651%
FM-25	Supply, delivery, and installation of Automatic Shoe Polishing Machine/Buff Polisher (Polish Shining Cleaner Machine) of approved make such as Dolphy, Technovision, or equivalent, consisting of soft polishing brushes for black and brown shoes, a cream polish dispenser, and automatic start/stop sensor mechanism, housed in a durable and elegant body suitable for office or lobby use, including all materials, accessories, electrical connections, labour, transportation, loading, unloading, installation, testing, and commissioning, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	2	₹ -	₹ -	0.0056682751%
FM-26	Supply, delivery, and installation of Smart Folding Electric Treadmill with auto incline, MP3 support, built-in speakers, DIY programs, and virtual assistance, suitable for gym and cardio training, of approved make such as PowerMax, Fitkit, Lifeline, or equivalent, featuring a sturdy foldable frame, shock-absorbing running belt, LED/LCD display for speed, distance, time, and calories, including all materials, accessories, electrical connections, transportation, loading, unloading, installation, testing, and commissioning, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	1	₹ -	₹ -	0.0212560316%
FM-27	Supply, delivery, and installation of 33×33 inch, 4mm Chakri Back Full-Size Carrom Board (International, for Professionals) of SYNCO or equivalent approved make, complete with free carrom coins, striker, and boric powder, manufactured from high-quality materials ensuring smooth playing surface and durability, including all accessories, packaging, transportation, loading, unloading, and placement at site, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	1	₹ -	₹ -	0.0047235626%
FM-28	Supply, delivery, and installation of Cricket Kit Set of DSC, SG, SS, or equivalent approved make, consisting of one cricket bat made from best quality Kashmir willow, one DSC helmet with high-impact resistant polypropylene outer shell, one pair of batting pads with traditional cane construction for maximum shock absorption, one thigh pad made from high-quality PVC material, one pair of batting gloves with pre-curved filled finger rolls for protection, flexibility, and comfort, one abdominal guard with traditionally shaped padded design, and one arm guard made from high-quality PVC material, including all materials, accessories, packaging, transportation, loading, unloading, and placement at site, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Set	1	₹ -	₹ -	0.0094471251%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

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FM-29	Supply, delivery, and installation of a 7 Kg, 5-Star rated Wind Jet Dry semi-automatic top-loading washing machine of LG, Whirlpool, Haier, Godrej or equivalent approved make, featuring durable construction, user-friendly controls, efficient wash programs, rust-resistant body, wind-jet dry function and top-loading design, including all materials, accessories, labour, transportation, loading, unloading, placement at site, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	1	₹ -	₹ -	0.0070853439%
FM-30	Supply, delivery, and installation of 126 cm (50 inches) 4K Ultra HD Smart LED TV of LG, Samsung, VU, or equivalent approved make, featuring high-resolution display, smart TV functionality with built-in apps, multiple HDMI and USB ports, energy-efficient operation, wall-mount or stand installation as required, including all materials, accessories, transportation, loading, unloading, installation, testing, and commissioning, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	2	₹ -	₹ -	0.0472356257%
FM-31	Supply, delivery, and installation of 80 cm (32 inches) HD Smart LED TV of LG, Samsung, VU, or equivalent approved make, featuring high-definition display, smart TV functionality with built-in apps, multiple HDMI and USB ports, energy-efficient operation, wall-mount or stand installation as required, including all materials, accessories, transportation, loading, unloading, installation, testing, and commissioning, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	2	₹ -	₹ -	0.0236178129%
FM-32	Supply, delivery, and installation of microwave oven, minimum 28 L capacity, convection type of LG or equivalent approved make, featuring multiple cooking modes, digital control panel, auto-cook menus, durable body, energy-efficient operation, including all materials, accessories, transportation, loading, unloading, and placement at site, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	2	₹ -	₹ -	0.0179495378%
FM-33	Supply, delivery, and installation of a single door refrigerator of minimum 184 L capacity of LG/Samsung/Haier or equivalent approved make, with energy-efficient operation, adjustable shelves, vegetable/fruit drawer, freezer compartment, and durable body finish, including all materials, accessories, transportation, loading, unloading, and placement at site, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	1	₹ -	₹ -	0.0075577001%
FM-34	Supply, delivery, and installation of a double door refrigerator of minimum 250 L capacity of LG/Samsung/Haier or equivalent approved make, featuring energy-efficient operation, separate freezer and refrigerator compartments, adjustable shelves, vegetable/fruit drawers, and durable body finish, including all materials, accessories, transportation, loading, unloading, and placement at site, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	1	₹ -	₹ -	0.0188942503%
FM-35	Supply, delivery, and installation of towel/cloth stand made of high-quality stainless steel of approved make, with sturdy construction, corrosion-resistant finish, and stable base, suitable for holding towels or clothes, including all materials, accessories, transportation, loading, unloading, and placement at site, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	5	₹ -	₹ -	0.0059044532%
FM-36	Supply, delivery, and installation of Badminton Rackets of Yonex or equivalent approved make, made from high-quality materials ensuring optimum balance, lightweight design, durability, and enhanced play performance, including all packaging, accessories, transportation, loading, unloading, and placement at site, complete in all respects as per manufacturer's specifications and to the entire satisfaction and direction of the Engineer-in-Charge.	Nos	6	₹ -	₹ -	0.0070853439%

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**BOQ CUM RATE SCHEDULE (PRICE BID)**

**SCOPE OF WORK:-**

Enabling Works Package Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
FM-37	Supply, delivery, and installation of competition-grade foldable table tennis table of approved make (Stag, Butterfly, Donic, JOOLA, or equivalent), complete with 25 mm thick high-quality MDF top with anti-glare, scratch-resistant finish (dark green or blue), heavy-duty powder-coated tubular steel frame (minimum 40×25 mm), foldable legs with safety locks and level adjusters, ITTF-approved net and post set with adjustable tension and height, lockable caster wheels for mobility, along with two rackets and three ITTF-approved balls, including all materials, accessories, transportation, loading, unloading, assembly, and installation at site, with one-year warranty against manufacturing defects, complete in all respects as per approved specifications and direction of the Engineer-in-Charge.	Nos	1	₹ -	₹ -	0.0244880564%
FM-38	Supply and installation of geyser of havelis or equivalent make ( 3 Litre Havells Instannio or equivalent)	NO	4	₹ -	₹ -	0.0121467801%
D	CCTV: Supply & installation of CCTV all complete as per specification & approval of BHEL					
D.1	Bullet Camera (2 MP, Night Vision, IR Range ≥ 30m, IP66, Metal Body, with mounting accessories, Power Adapter, and complete installation)	Nos	13	₹ -	₹ -	0.0286850720%
D.2	Bullet Camera (4 MP, Night Vision, IR Range ≥ 50m, IP66, Metal Body, with mounting accessories, Power Adapter, and complete installation)	Nos	13	₹ -	₹ -	0.0439973880%
D.3	Wiring with 3+1 CCTV Cable (Power + Video), laid and fixed to wall/ceiling using clamps, saddles, and casing capping as required, complete with terminations	RM	650	₹ -	₹ -	0.0094229637%
D.4	8 Channel DVR (H.265/H.264 compression, HDMI/VGA Output, 1 SATA up to 6TB, with power supply, complete installation, testing, and commissioning)	Nos	2	₹ -	₹ -	0.0088563778%
D.5	16 Channel DVR (H.265/H.264 compression, HDMI/VGA Output, 2 SATA up to 10TB, with power supply, complete installation, testing, and commissioning)	Nos	2	₹ -	₹ -	0.0195127833%
D.6	LED Display Monitor 32" (Full HD, wall/desk mount with HDMI cable, complete installation)	Nos	2	₹ -	₹ -	0.0176583924%
D.7	LED Display Monitor 42" (Full HD, wall/desk mount with HDMI cable, complete installation)	Nos	2	₹ -	₹ -	0.0476814044%
D.8	Desktop Computer (Core i5, 8GB RAM, 512GB SSD, Windows 11 Pro, 22" LED Monitor, Keyboard & Mouse, with installation & configuration for CCTV software)	Set	2	₹ -	₹ -	0.0960985248%
E	<b>ELECTRICALS AND ILLUMINATION WORK:</b> Supply, fixing and commissioning of electrical works required for modular office, closed sheds and safety park all complete as per specification & approved drawings. Bidder to supply & install electrical items like Main Switch with earth leakage protection (30A TPN) suitable sockets/switch units for A/C points, wires, conduits, tees, bends, clamps, JBs, 5amps socket, Modular switch boards & points for computers & telephone for each table/desk, earthing wires etc. complete as per specifications / site requirement. Lighting system shall be designed to meet minimum 300Lux of modular type suitable for false ceilings (for office areas). Also, the bidder should take care of aesthetics and energy conservation. A detailed schematic with BOM (brands/ makes) of the electrical fittings shall be submitted for approval from BHEL.					
E1	Supply, Installation and Commissioning of 415 volt AC , 3 phase /four wire power feeder pillar board , board shall be comprises of three number and one number aluminium bus bar for phase & neutral respectively. Bus bar rating shall be 200 Amps and shall be mounted on epoxy insulator of 1.1 kV grade, each bus bar shall have drilled hole for connecting incoming / out going cables, provision for earthing the panel enclosure. Panel enclosure shall be made of sheet metal thickness not less than 1.6 mm and suitable for out door installation, hinged door with locking arrangement, base frame, should have slopped canopy, duly painted with first coat with primer and two coats of synthetic enamel paint (interior with white paint and exterior with smoke grey as per IS), suitable stool made out of MS structure of 1.2 meter high for mounting of panel with anchoring arrangement at foundation . Note: Suitable foundations to be prepared for mounting the Distribution Board. Civil Works related to construction of foundations shall be paid separately under relevant BOQ Items	NOS.	12	₹ -	₹ -	0.1226072546%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
E2	Supplying & installing power distribution board complete with: 1) Incoming MCB TPH 100 amps. - 1 no. 2) Outgoing MCB TPH 32 amps. -3nos. 3) RCCB DP 25/20 amps. - 2nos. 4) Outgoing MCB SP 6 amps - 6nos. Distribution boards shall with internal busbars, internal wiring, 2 nos. earthing terminals, earth connections, including glands, lugs.	SET	11	₹ -	₹ -	0.2230856454%
E2-A	Supplying & fixing wall mounting type lighting panels, each with : (1) Incoming MCB TPN -32 amps - 1no. (2) RCCB DP 32 amps - 2nos (3) MCB SP 6amps - 30 nos.. Lighting panel shall be with internal busbars, 2 nos. earthing terminals, earth connections, including glands, lugs & wiring from main DB.	SET	13	₹ -	₹ -	0.1722046616%
E3	Supply and Installation of earth electrode 40 mm dia 3 metre long GI pipe directly driven into earth including earth excavation if required.	Nos	23	₹ -	₹ -	0.0553323677%
E4	Supplying & installation of SWG GI wire for earthing including supply & termination with lugs					
a)	Supplying & installation of 16 SWG GI wire for earthing including supply & termination with lugs as required.	RM	50	₹ -	₹ -	0.0004877592%
b)	Supplying & installation of 8 SWG GI wire for earthing including supply & termination with lugs as required.	RM	50	₹ -	₹ -	0.0004620876%
E5	Supply & fixing of iron clad main switches TPN/ DP on angle iron frame duly painted/ on wall, with all required materials, hardwares, etc. as per instruction of BHEL Engineer, of Standard make (Havells/crompton/approved make) -					
a)	200A 415V TP+N AC Open Execution with 3 Fuses DIN Type Switch Disconnecter Fuse with Cubicle Mounting Panel,( Main Switch)	Nos	3	₹ -	₹ -	0.0623818318%
b)	63 A TPN	Nos	3	₹ -	₹ -	0.0192536518%
c)	32A TPN.	Nos	3	₹ -	₹ -	0.0086256360%
d)	32A DP.	Nos	3	₹ -	₹ -	0.0068543000%
e)	16A DP.	Nos	5	₹ -	₹ -	0.0059044532%
E6	Supply & fixing of sheet metal (16SWG) iron clad busbar chamber (W=500mm x D=150mm) on angle iron frame duly painted on wall with 4 Al bars (25mm x 5mm x 600mm) 500V, with adequate nos of holes drilled for connection of incoming & outgoing ckts, bars are fixed on porcelain insulators. Including supply of required hardwares for connection, fitted with DANGER board, all complete as per instruction of BHEL Engineer.	Nos	3	₹ -	₹ -	0.0090877236%
E7	Supply & fixing of metal sheet MCB BOX, as per instruction of BHEL Engineer -					
a)	4 Way	Nos	3	₹ -	₹ -	0.0019253652%
b)	6 way	Nos	3	₹ -	₹ -	0.0055450517%
c)	8 way	Nos	3	₹ -	₹ -	0.0064692270%
d)	12 way	Nos	3	₹ -	₹ -	0.0090877236%
E8	Supply & fixing of Metal Junction Box with connector Lugs, as per instruction of BHEL Engineer -					
a)	Size (8"X10"X3") to terminate 10 sqmm cable and 4/2.5 sqmm cable	Nos	3	₹ -	₹ -	0.0046208764%
b)	Size (8"X6"X3") to terminate 10 sqmm cable and 2.5 sqmm cable/1sqmm cable	Nos	3	₹ -	₹ -	0.0043128180%
E9	Supply & fixing of composite flush/box mounted type 250 volt 6 Pin 15 Amps Plug socket integral fuse, with single phase motor starter with overload protection, on sheet metal box with bakelite cover and earthing attachment including Switch and Fuse of matching PVC box-make ANCHOR or approved make (Pantry/Kitchen/AC), as per instruction of BHEL Engineer.	Nos	193	₹ -	₹ -	0.1585474046%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

## BOQ CUM RATE SCHEDULE (PRICE BID)

## SCOPE OF WORK:-

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha

ST NO	ITEM DESCRIPTION	UOM	TOTAL QTY	RATES = TOTAL QUOTED PRICE * WEIGHTAGE / (QUANTITY * 100)	AMOUNT (INR) = RATE * QUANTITY	WEIGHTAGE IN % (UPTO 10 DECIMAL POINT)
E10	Supply & fixing composite flush type 250 volt 5 Pin 5Amps Plug socket integral fuse with 5 Amps piano key type switch on sheet metal box with bakelite cover and earthing attachment including Switch and Fuse of matching PVC box-make ANCHOR /or approved make ( for Computers /printers), as per instruction of BHEL Engineer.	Nos	158	₹ -	₹ -	0.0973464635%
E11	Providing and installing 63 KVA Diesel Power Generator, as per specification suitable for Office Purpose.	NOS.	3	₹ -	₹ -	1.1753335108%
E12	Supply and installation of switchboard of sheetmetal box with bakelite cover, as per instruction of BHEL Engineer -					
a)	Size 4"X8"	Nos	5	₹ -	₹ -	0.0018252462%
b)	Size 4"X10"	Nos	5	₹ -	₹ -	0.0020280513%
c)	Size 4"X4"	Nos	5	₹ -	₹ -	0.0016429783%
d)	Size 10"X12"	Nos	5	₹ -	₹ -	0.0026364667%
E13	Supply and installation of SP MCB for lighting / Power purpose-					
a)	16 Amps	Nos	5	₹ -	₹ -	0.0016429783%
b)	6 Amps	Nos	5	₹ -	₹ -	0.0014119345%
c)	25A/32 Amps	Nos	5	₹ -	₹ -	0.0022590951%
E14.1	1.1 KV grade LT PVC 3.5Cx95 sqmm Al Armoured Cable					
a)	Supply of 1.1 KV grade LT PVC 3.5Cx95 sqmm Al Armoured Cable	RM	430	₹ -	₹ -	0.1145329828%
b)	Laying below ground in excavated trench average depth 800 mm with 8 nos of brick on top of the cable per meter including filling the space between brick & cable and also the trench with shifted soil levelling and restoring the surface duly rammed & compacted, as per instruction of BHEL Engineer.	RM	430	₹ -	₹ -	0.1588646444%
c)	Laying of cable either on wall through fixing by clamping or hanging on temporary pipe supports at some suitable interval of cable route. Height of cable to be maintained for hinderance free movement of people on work.	RM	105	₹ -	₹ -	0.0066759886%
d)	End termination ( both side) including supply of glands & lugs	Nos	105	₹ -	₹ -	0.1151155817%
E14.2	3.5 core 25 sqmm PVC, armoured Aluminium cable of 1.1 KV grade as per IS-1554 & laying.					
a)	Supply & laying of of 3.5 core 25 sqmm PVC, armoured Aluminium cable of 1.1 KV grade as per IS-1554.	RM	700	₹ -	₹ -	0.0781876864%
b)	Laying below ground in excavated trench average depth 800 mm with 8 nos of brick on top of the cable per meter including filling the space between brick & cable and also the trench with shifted soil levelling and restoring the surface duly rammed & compacted, as per instruction of BHEL Engineer.	RM	700	₹ -	₹ -	0.2513994663%
c)	Laying of cable either on wall through fixing by clamping or hanging on temporary pipe supports at some suitable interval of cable route / through High Mast Pole	RM	105	₹ -	₹ -	0.0054130318%
d)	End termination ( both side) including supply of glands & lugs	Nos	105	₹ -	₹ -	0.0694655448%
E14.3	1.1 KV grade LT PVC 4Cx10 sqmm Al Armoured Cable					
a)	Supply of 1.1 kV LT PVC 4Cx10 sqmm Al Armoured Cable .	RM	700	₹ -	₹ -	0.0601425548%
b)	Laying of cable either on wall through fixing by clamping or hanging on temporary pipe supports at some suitable interval of cable route	RM	700	₹ -	₹ -	0.1263356335%
c)	End termination ( both side) including supply of glands & lugs	Nos	105	₹ -	₹ -	0.0586404731%
E15	Supply, drawing through PVC conduit/casing, termination, testing & commissioning as wiring for lighting, power & earthing circuits:					
a)	1 core 6 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade	RM	25	₹ -	₹ -	0.0011552191%
b)	1 core 4 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade	RM	825	₹ -	₹ -	0.0343100075%
c)	1 core 2.5 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade	RM	1650	₹ -	₹ -	0.0344794396%
d)	1 core 1.5/1 sqmm PVC insulated, stranded Copper wire of 1.1 KV grade	RM	63	₹ -	₹ -	0.0011968070%
e)	1 core 1 sqmm PVC insulated, Green stranded Copper wire for earthing of inside building	RM	63	₹ -	₹ -	0.0009380379%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

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## SCOPE OF WORK:-

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha

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E16	Supply and fixing of PVC conduit with all bends, tees, reducers, rectangular/circular box, clamps, saddles, etc. along with the accessories in surface/ recess in beam/ roof slab/ wall/ false ceiling and making good the same as required, as per instruction of BHEL Engineer.					
a)	1" dia rigid	RM	125	₹ -	₹ -	0.0096268259%
b)	1" dia flexible	RM	125	₹ -	₹ -	0.0083432491%
E17	Supply and fixing of PVC casing with all bends, tees, reducers, rectangular/circular box, clamps, saddles, etc. along with the accessories in surface/ recess in beam/ roof slab/ wall/ false ceiling and making good the same as required, as per instruction of BHEL Engineer.					
a)	1.5" dia	RM	125	₹ -	₹ -	0.0111696973%
b)	1" dia	RM	125	₹ -	₹ -	0.0085919519%
c)	0.5" dia	RM	125	₹ -	₹ -	0.0053702044%
E18	Supply & fixing of ceiling rose on circular boxes, as per instruction of BHEL Engineer ( To be installed in BHEL supplied Store)	Nos	25	₹ -	₹ -	0.0011552191%
E19	Supply of outdoor luminaires ( IP 65/IP 66) suitable for mounting on 40mm dia swan neck GI pipe and suitable for 1x150 W LED lamps in cast aluminium body with water proof toughened glass cover along with lamps, control gear, etc including internal wiring, fixing/ supporting accessories complete	Nos	3	₹ -	₹ -	0.0107820450%
E20	Supply & Fixing on wall 40 mm dia swan neck GI pipe with suitable clamps etc Including all fixing/ supporting accessories complete and flexible wire for connection between ceiling rose & fitting & commissioning of outdoor luminaires ( IP 65/IP 66) suitable for 1x150 W LED lamps in cast aluminium body with water proof toughened glass cover along with lamps, control gear, etc including internal wiring, fixing/ supporting accessories complete.	Nos	3	₹ -	₹ -	0.0016943214%
E21	Supply & fixing of Indoor type LED Industrial Highbay luminaries with 1x80 W LED lamp [ Make: BAJAJ / PHILIPS/ GE/ CROMPTON/ HAVELLS ] from roof truss with suitable clamp arrangement, flexible wire for connection between ceiling rose & fitting and commissioning 1x80 W LED luminaries with Lamp , control gear, etc including internal wiring, fixing/ supporting accessories complete. . ( To be installed in BHEL supplied Store)	Nos	3	₹ -	₹ -	0.0140166585%
E22	100 watt LED light with hanging arrangement all complete.	NOS.	143	₹ -	₹ -	0.2195275706%
E23	Supply & Installation of Exhaust Fan of different Sweep mentioned below (Crompton Greves or Equivalent make)					
a)	300 mm	Nos	3	₹ -	₹ -	0.0070853439%
b)	450 mm	Nos	3	₹ -	₹ -	0.0092109470%
c)	600 mm	Nos	20	₹ -	₹ -	0.1228126269%
E24	Supply of local make approved quality Pedestal fan - 16" sweep.(On requirement Basis after getting approvals from BHEL)	Nos	10	₹ -	₹ -	0.0282386893%
E25	Supply & installation of Ceiling Fan 48" sweep of Havells/Crompton or equivalent(On requirement Basis after getting approvals from BHEL)	Nos	5	₹ -	₹ -	0.0084732377%
E26	Supply & installation of Wall mounted fan 400mm sweep	Nos	48	₹ -	₹ -	0.0985786972%
E27	Supply and installation of 3.5C X2.5sqmm armoured Cu cable	RM	63	₹ -	₹ -	0.0064368809%
E29	Supply & installation of 15/ 16 A piano type switch.	Nos	25	₹ -	₹ -	0.0023104382%
E30	Supply & installation of 15/ 16 A flush type power socket.	Nos	25	₹ -	₹ -	0.0028238689%
E31	Supply & installation of 5/ 6 A piano type switch.	Nos	25	₹ -	₹ -	0.0010311259%
E32	Supply & installation of 5/ 6 A flush type power socket.	Nos	25	₹ -	₹ -	0.0016754754%
E33	Supply & fixing of composite type single phase air conditioning machine starter( Havelles/Crabtree/Anchor or equivalent) with Pin socket and plug top fitted on suitable sized PVC box.					
a)	For rating of 15 A application	Nos	10	₹ -	₹ -	0.0056477379%
b)	For rating of 25 A application	Nos	10	₹ -	₹ -	0.0097551836%

## PROJECT: LSTK-1 &amp; LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.

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**SCOPE OF WORK:-**

Enabling Works Package\_Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

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E34	Supply and fixing two module stepped type electronic fan regulator on the existing modular plate switch box includinf connections but excluding modular plate etc. as required	Nos	10	₹ -	₹ -	0.0022288933%
E35	Supply and delivery of Electric Kettle of high-quality, durable design, suitable for office or domestic use. The kettle shall have a minimum capacity of 1.5 liters, a power rating of 1500-2000 Watts, and shall operate on 230V ±10%, 50Hz AC single-phase supply. The body shall be made of stainless steel or heat-resistant food-grade plastic, complete with an automatic cut-off feature for boil-dry protection, a detachable base, and an indicator light. The kettle shall conform to relevant IS/IEC safety standards and shall be supplied with manufacturer's warranty and all necessary accessories.	Nos	3	₹ -	₹ -	0.0027181626%
E36	Supplying and fixing piano type bell push switch on the existing switch box/cover including connections etc. as required	Nos	50	₹ -	₹ -	0.0077014607%
E37	Supplying and fixing following double pole, (single phase and neutral), 240 v, residual current circuit breaker (RCCB), having a sensitivity current 30 mA in the existing MCB DB complete with connections, testing and commissioning etc. as required					
a)	40A DP AC RCCB,30mA	Nos	3	₹ -	₹ -	0.0066232562%
b)	63A DP AC RCCB,30mA	Nos	3	₹ -	₹ -	0.0089336944%
E38	Supplying and fixing call bell/buzzer suitable for single phase, 230 V, complete as required	Nos	5	₹ -	₹ -	0.0012835768%
E39	Supplying and fixing of LED Bulbs/Batterns					
a)	20w led battern 230v, energy-efficient type, complete with all necessary accessories such as holder clips, connection leads, and mounting arrangements	Nos	145	₹ -	₹ -	0.0511126675%
b)	40w led battern 230v, energy-efficient type, complete with all necessary accessories such as holder clips, connection leads, and mounting arrangements	Nos	15	₹ -	₹ -	0.0074067627%
c)	9 Watt (9W) LED bulb, energy-efficient type, complete with all necessary accessories such as lamp holder, connection leads, and mounting arrangements	Nos	24	₹ -	₹ -	0.0011698235%
d)	12 Watt (12W) LED bulb, energy-efficient type, complete with all necessary accessories such as lamp holder, connection leads, and mounting arrangements	Nos	24	₹ -	₹ -	0.0015428107%
e)	20 Watt (20W) LED bulb, energy-efficient type, complete with all necessary accessories such as lamp holder, connection leads, and mounting arrangements	Nos	24	₹ -	₹ -	0.0042215369%
E40	Supply and installation of Philips/Havells/Equivalent make 32 watt /40 watt LED 2x2 LED light fittings of minimum 1 year gaurantee with accessories including testing and commissioning of pre-wired, complete with all accessories and tube/lamp etc. directly on ceiling/ wall, including connections with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable and earthing etc. as required.	Nos	65	₹ -	₹ -	0.1053565201%
E41	Supply and installation of AC machines at BHEL site office, including supply of relevant electrical fittings and fixtures, and commissioning upon installation, etc complete.					
a)	Supply and Installation of 1.5 Ton 5 Star , 5 Years Comprehensive Warranty, Split AC (LG/Samsung/Voltas/Godrej or Equivalent ) (Copper, Heavy Duty Cooling, Latest Model,as per instruction of Engineer-In-Charge	Nos	20	₹ -	₹ -	0.4723562573%
b)	Supply and Installation of 2.0 Ton 5 Star , 5 Years Comprehensive Warranty, Split AC (LG/Samsung/Voltas/Godrej or Equivalent ) (Copper, Heavy Duty Cooling , Latest Model,as per instruction of Engineer-In-Charge	Nos	55	₹ -	₹ -	1.4288776783%
<b>G</b>	<b>Furniture For Safety Park &amp; Other areas</b>					
G-1	Supply and installing Executive revolving chairs include adjustable seat height, 360-degree swivel, smooth-rolling casters, etc (650 X 470 X 1220 mm)	Nos	8	₹ -	₹ -	0.0225233960%
G-2	Supply and installing Computer / Office Table (1200 X 600 X 750 mm)	Nos	8	₹ -	₹ -	0.0221138595%
G-3	Supply and installing Student flap chair with folding writing tablet attached to the frame, 580 x 480 x 420 mm in size, with a mild steel frame, fabric seat, and a wooden writing pad.	Nos	125	₹ -	₹ -	0.1503695104%
G-4	Supply and installing Visitor's chair (580 X 670 X 990 mm)	Nos	10	₹ -	₹ -	0.0127973512%

**PROJECT: LSTK-1 & LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.**  
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G-5	Supply and installing A 3-seater hospital bench typically measures around 1800 mm (6 feet) in length, with a depth of 680mm and a backrest height of 800mm	Nos	25	₹ -	₹ -	0.0767843184%
G-6	Supply and installing Semi-Fowler bed (hospital bed) designed with a backrest that can be raised to a certain angle 30 & 45 degrees Size of bed (2060 X 900 X 600mm)	Nos	5	₹ -	₹ -	0.0204757981%
G-7	Supply and installing Steel almirah 1800 MM for files (standard size)	Nos	8	₹ -	₹ -	0.0511895013%
G-8	Supply & Installation Vertical blinds of approved shade, make and profile for windows	Sqm	100	₹ -	₹ -	0.0537549877%
G-9	Supply and installing Plastic Chair (556 X 480 X 850 mm)	Nos	15	₹ -	₹ -	0.0065266708%
G-10	Supply & Installation of White board (6'X4') with duster & 02 nos marker	Nos	5	₹ -	₹ -	0.0046070440%
G-11	Supply and delivery of high-quality outdoor dustbins (make-Aristo, Nilkamnal or equivalent) of injection-moulded HDPE plastic, UV-stabilized, corrosion-resistant, and suitable for outdoor use. The dustbin shall be provided with a swing/hinged/flap lid (specify type) for hygienic waste disposal. The unit shall include integrated handles for easy lifting, rugged base for stability, and smooth inner and outer surfaces for easy cleaning. Color: Green/Blue/As specified. All materials, workmanship, and finish shall conform to industry standards complete in all respects as directed by the Engineer-in-Charge.					
a)	70L capacity	Nos	6	₹ -	₹ -	0.0063162344%
b)	120 L Capacity	Nos	3	₹ -	₹ -	0.0067467944%
N	<b>Networking: Supply &amp; installation of networking works required for modular office all complete as per specification &amp; approved drawing</b>					
N-1	Supply, delivery, and installation of wall-mounted 9U Rack, powder-coated MS steel with lockable doors, ventilation, and cable management.	NOS.	2	₹ -	₹ -	0.0085696398%
N-2	Supply, delivery, and installation of 24 Port Jack Panel with I/O, compatible with CAT6 cabling. Includes labeling and mounting.	NOS.	3	₹ -	₹ -	0.0114757563%
N-3	Supply, delivery, and installation of 7 ft Patch Cord, CAT-6 compliant, with RJ45 connectors.	NOS.	72	₹ -	₹ -	0.0153730063%
N-4	Supply, delivery, and installation of 28 Port Gigabit Layer 2 Managed Switch, reputed make, BHEL approved, with 3 years OEM warranty.	NOS.	3	₹ -	₹ -	0.0572175071%
N-5	Supply, delivery, and installation of RJ45 CAT6E LAN Keystone Jack + Gang Box + Single Port Faceplate.	NOS.	72	₹ -	₹ -	0.0147448619%
N-6	Supply, delivery, and installation of 3 ft Mounting Cord, CAT-6 standard, with RJ45 connectors.	NOS.	72	₹ -	₹ -	0.0133410738%
N-7	Supply, delivery, and installation of RJ45 Connectors suitable for CAT5E/CAT6 cables.	NOS.	1000	₹ -	₹ -	0.0044769060%
N-8	Supply, delivery, and installation of CAT 5E UTP Cable, solid copper, laid as per specs.	RM	1800	₹ -	₹ -	0.0534963276%
N-9	Supply, delivery, and installation of WiFi Access Point (802.11n) with mounting and configuration.	NOS.	2	₹ -	₹ -	0.0247217043%
N-10	Supply, delivery, and installation of 10 KVA UPS with 60 min backup, SMF batteries, 3 years warranty including one-time battery replacement.	NOS.	2	₹ -	₹ -	0.2567395187%
N-11	Telephone Junction boxes (MDF) Krone type with lock & key	NOS.	50	₹ -	₹ -	0.0179024230%
N-12	Supply & Erection of data line system such as I/O and Cat 6 cable	NOS.	50	₹ -	₹ -	0.0092646346%
N-13	Supply & Erection of voice line system such as I/O and 2 pair telephone cable	NOS.	50	₹ -	₹ -	0.0038760999%
	<b>TOTAL PACKAGE-B</b>					<b>50.4015162515%</b>
	<b>GRAND TOTAL = PACKAGE-A + PACAKAGE-B</b>					<b>100.0000000000%</b>

**PROJECT: LSTK-1 & LSTK-2 for Coal Gasification Unit for Coal to Ammonium Nitrate Plant, Lakhanpur area, Jharsuguda, Odisha.****BOQ CUM RATE SCHEDULE SUMMARY (PACKAGE-A & PACKAGE-B)****SCOPE OF WORK:-****PACKAGE- A - Immovable Items**

Immovable Items of Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

**PACKAGE-B:-Movable Items**

Movable Items of Civil, Structural & Architectural Works Including Supply Of Fabricated Materials, Design(Wherever Applicable) Of Buildings/Systems, Erection, Sanitary Work, Plumbing, Internal Electrification, Painting & Finishing Works, Furniture, Roads And Drains Etc. All Complete As Per Drawings & Specification And Handing Over To Site at **LSTK-1 & LSTK-2 For Coal Gasification Unit For Coal To Ammonium Nitrate Plant, Lakhanpur Area, Jharsuguda, Odisha**

Sl. No.	Item Description	UOM	QTY	Total Amount Quoted by Bidder	Weightage (In %age)
1	PACKAGE-A: IMMOVABLE ITEMS	As per BOQ Cum Rate Schedule		₹ -	49.5984837485%
2	PACKAGE-B: MOVABLE ITEMS	As per BOQ Cum Rate Schedule		₹ -	50.4015162515%
3	<b>TOTAL</b>			₹ -	100.000000000%

<b>PREAMBLE FOR BOQ CUM RATE SCHEDULE</b>	
<b>1</b>	<b>Preamble for the Schedule of Quantities/BOQ Cum Rate Schedule:</b>
1.1	Details of the items in the BOQ Cum Rate Schedule shall be read in conjunction with the Corresponding Consultants/ Customer specifications, drawings and other documents and shall have precedence over any contrary statement mentioned anywhere in this document.
1.2	The work shall be carried out as per construction drawings, specifications, the description of the items in this schedule and/or Engineer's instructions, Drawings enclosed with these documents are only indicative giving some idea of the type of work involved. The layout, sizes and details of the building, structures and foundations shown in tender drawings may vary at a large extent during actual construction. Final drawings will be issued progressively during the execution of the work.
1.3	Items of work provided in this schedule but not covered in the specifications shall be executed strictly as per instructions of the Engineer.
1.4	Unless specifically mentioned otherwise in the contract, the contractor shall quote his rates for the finished items and shall provide for the complete cost towards fuel, tools, tackle, equipment, constructional plant, temporary works, labour materials, levies, taxes, transport, layout, repairs, rectification, maintenance till handing over, supervision, shops, establishments, services, temporary roads, revenue expenses, contingencies, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the works according to the contract.
1.5	The rate shall also be inclusive of carrying out topography survey of site to establish levels and coordinates at suitable intervals, from existing grid levels and coordinates furnished by the owner, establish bench marks, setting out the location and levels of the proposed structures, constructions and making references, pillars and other identification marks etc. No separate payment will be made towards the same.
1.6	The quantities of the various items mentioned in the BOQ cum Rate Schedule are approximate and may vary up to any extent or be deleted altogether. The overall variation in contract value on execution shall be dealt as per GCC. Contractor has to obtain prior approval of BHEL/ Customer before procurement of bought out items/ building materials.
1.7	BHEL Engineer's decision shall be final and binding on the contractors regarding clarification of items in BOQ cum Rate schedule with respect to the other sections of the contract.
1.8	In case of any discrepancy between item description, relevant specification, clarification shall be sought at tender stage itself. Otherwise it shall be assumed that the contractor has quoted for the more stringent requirement.