

	<b>4X125 MW KOSTI Thermal Power Plant</b>	<b>RATE SCHEDULE CUM BILL OF QUANTITIES</b>			
		<b>TOTAL CIVIL WORKS FOR ROADS / DRAINS / UTILITY BUILDINGS PACKAGE</b>			
<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
<b>100</b>	<b>EARTH WORK IN EXCAVATION, BACKFILLING AND DISPOSAL AS PER SPECIFICATION AND DRAWINGS</b>				
101	<b>Excavation</b> including providing coffer dams, shoring, strutting, sheeting, bracing, draining and pumping out water other than water below ground water table, clearing all grass, vegetation etc. including trimming of excavation bottom, staking, levelling, grading etc. of excavated materials all complete as per specifications, drawings and instructions of the engineer, including a lead(disposal) up to 100 meters and <b>a lift up to 2.0 meters.</b>				
i)	In <b>all types of soils</b> including expansive soil, ash, morrum, laterite	CUM	408289		
102	Extra over item 101 above, for all types of soil/rock, <b>for additional lifts</b> beyond the initial lift of 2 meters (included in item 1 above) all complete as per specifications, drawings and instructions of the engineer for the following lifts:				
i)	In all types of soils				
a	beyond 2 m and upto 4 m	CUM	40845		
b	beyond 4 m and upto 7 m	CUM	35		
104	Extra over item 101 above for <b>carriage of all types of excavated materials</b> beyond the initial lead of 100 m (included in item 1 above) all complete as per specifications, drawings and instructions of the engineer for the following leads				
i)	Carriage beyond initial lead of 100 m but not exceeding 500 m	CUM	82445		
ii)	Carriage beyond initial lead of 500 m but not exceeding 2 Km	CUM	52325		
iii)	Carriage beyond initial lead of 2 Km but not exceeding 5 Km	CUM	19121		
iv)	Carriage beyond initial lead of 5 Km but not exceeding 10 Km	CUM	11405		
105	<b>BACKFilling using selected excavated materials</b> in trenches, plinths, foundations and other underground structures, pipes, etc. in layers not exceeding 200 mm thickness including re-excavation and loading from stock pile, transporting, unloading, filling, watering and compacting/ramming each layer to required degree as mentioned below for all leads and lifts all complete as per specifications, drawings and as directed by the engineer to achieve the following densities:				
i)	Minimum 85% Standard Proctor density	CUM	270		
ii)	Minimum 90% Standard Proctor density	CUM	66193		

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iii)	Minimum 95% Standard Proctor density	CUM	9270		
105A	<b>BACKFilling using selected excavated materials</b> <u>directly from excavation area</u> in trenches, plinths, foundations and other underground structures, pipes, etc. in layers not exceeding 200 mm thickness including filling, watering and compacting/ramming each				
i)	Minimum 85% Standard Proctor density	CUM	270		
ii)	Minimum 90% Standard Proctor density	CUM	3526		
iii)	Minimum 95% Standard Proctor density	CUM	1647		
106	<b>BACKFilling</b> in trenches, plinths, foundations, and other under ground structures, pipes etc using selected soil from borrow areas in layers not exceeding 200 mm in thickness and including excavating, loading, unloading, transporting, filling, watering				
i)	With <b>selected soil</b> non expansive soil brought from borow areas arranged by contractor including royalties, fees if any etc.				
a	Minimum 90% Standard Proctor density	CUM	27936		
b	Minimum 95% Standard Proctor density	CUM	92		
106A	<b>Filling using selected materials</b> from borrow areas below foundations and other under ground structures, pipes etc. in layers not exceeding 200 mm in thickness including excavating, loading, unloading, transporting, filling, watering and compacting/ramming each layer etc for all leads and lifts all complete as per specifications, drawings and as directed by the engineer for the following :	CUM	80879		
	With <b>selected non expansive soil</b> brought from borow areas arranged by contractor, including royalties, fees etc. if any compacted to 100% Standard Proctor Density				
107	<b>Filling</b> in trenches, plinths, area paving and other underground structures <b>with stone</b> (63 mm down graded), in layers not exceeding 200 mm thickness including breaking of boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts all complete as per instructions of engineer-in-charge.	CUM	261		

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108	<b>Filling</b> in transformer pits etc. , with clean 40 mm nominal size <b>stone aggregate</b> including all labour, materials, royalties, equipments etc. complete as per instructions of engineer in charge.	CUM	45		
200	PROVIDING AND PLACING CONCRETE WORK INCLUDING COST OF LABOUR, MATERIALS AND EQUIPMENT FOR HANDLING, TRANSPORTATION, BATCHING, MIXING, PLACING, VIBRATING AND CURING, (EXCLUDING COST OF CENTERING, SHUTTERING AND REINFORCEMENT) COMPLETE AS PER DRAWING AND SPECIFICATIONS UNLESS SPECIFIED OTHERWISE FOR THE FOLLOWING: ( IN CASE OF UNDERGROUND WATER AGRESSIVENES, SPECIAL CORRESPONDING CEMENT TO BE USED)				
202 A	Concrete of <b>grade M15</b> as <b>levelling course</b> , under and around foundations/floors etc with 40 mm nominal size graded aggregate.	CUM	5233		
203	Concrete of <b>grade M20</b> in foundations, under floors etc complete with 20 mm nominal size graded aggregate.	CUM	760		
204	Concrete of grade <b>M-25</b> in <b>foundations, under floors</b> etc complete with 20 mm nominal size graded aggregate.	CUM	7413		
205	Concrete of grade <b>M-25</b> in <b>superstructure</b> from finished floor level complete at all heights with 20 mm nominal size graded aggregate	CUM	4065		
208	<b>Screed concrete</b> 1:2:4 conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at any level or thickness complete.	CUM	105		

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209	Concrete of grade <b>M-25 in precast works</b> like roof slabs/trench covers, fins, lintels, chajas, beams, columns, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjusant precast units with M30 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).	CUM	14		
210	Concrete of grade <b>M25 in foundation, superstructure of water retaining structures</b> either below or above finished floor level including addition of suitable plastisizer confirming to IS 9103 latest to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and subsequent reduction in cement content upto a maximum 10% complete etc. as per specification with 20 mm nominal size graded aggregate.	CUM	13500		
211	Concrete of <b>Grade M-20</b> in paving, plinth protection, pipe encasing etc. complete with 20 mm nominal size graded aggregate.	CUM	18		
214 A	Providing and laying 50mm thick lime concrete below earth fill complete as per specifications	SQM	162000		
300	SUPPLYING, FIXING AND REMOVING FORMWORK AT ANY ELEVATIONS FOR ALL STRUCTURES, AS PER SPECIFICATIONS AND INCLUDING ALL LABOUR MATERIAL, SCAFFOLDINGS AND CENTEREING COMPLETE INCLUDING POCKETS ETC. FOR THE FOLLOWING:				
301	<b>Ordinary form work below finished ground floor level</b> for foundations, footings, bases of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	SQM	68366		

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302	<b>Fairface form work below finished ground floor level</b> for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc. for exposed concrete works.	SQM	52389		
303	<b>Ordinary form work above finished ground floor level</b> for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches etc. for all heights.	SQM	17087		
304	<b>Fairface form work above finished ground floor level</b> for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches etc. for all heights.	SQM	9891		
306	Providing, fixing and removing formwork in block-outs/pockets and openings (below 0.1 sqm contact surface area with concrete) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and				
i)	Upto 300 mm depth	Nos.	46		
ii)	From 301 mm upto 600 mm depth	Nos.	46		
iii)	From 601 mm upto 1000 mm depth	Nos.	46		
400	<b>REINFORCEMENTS</b>				
401	Providing, straightening cutting, bending, placing in position at any level, binding of <b>mild steel reinforcements</b> in concrete including cost of reinforcement and binding wire, labour etc. complete all as per specifications & drawings. Steel shall be supplied free of cost as per Clause 39.	MT	1		
402	Providing, straightening, cutting, bending, placing at any level, binding in position <b>high yield strength steel reinforcements</b> in concrete including cost of reinforcement and binding wire, labour etc. complete all as per specifications & drawings. Steel shall be supplied free of cost as per Clause 39.	MT	2297		

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500	<b>WATER PROOFING</b> AS PER SPECIFICATIONS. (Contractor has to furnish a guarantee for material and workmanship for a minimum period of 20 years.)				
501	Providing and laying roof water treatment using multiplas standard waterproofing membrane. Thickness of membrane will be 3.0mm. this treatment will include coating the surface with compatible Multiplas Primer/ Multiplas Blown Bitumen of 85/25 or 90/15 grade and torch application of membrane with 100mm overlaps where required including 100 foam concrete insulation for TG bay and 75 mm for other bldg roof.h polymeric membrane of 4 kg/sq.m (multiplas - F manufactured by IWI or similar). Base preparation: surface shall be free from loose particles with no voids, honey combs or protrusion. Treatment shall include application of polymerized mortar over roof achieving a smooth surface and a primer coat. Laying: Bituminous emulsion is applied @ 100 grams/ sqm. and allowed to dry. Membrane shall be laid over a layer of hot blown bitumen 85/25 or 90/15 @ 1.2 kg/ sq.m and overlaps are sealed with torch application.  Topping: The entire surface is covered with a layer of hot blown bitumen 85/25 or 90/15 @ 1.2 kg/sqm and finished with multiplas bituminous aluminum primer at 100 grams/sqm. Final topping: final topping with cement screed of 1:5 ratio and 20 mm thick with chicken wire mesh reinforcements of 26 SWG. This shall be properly cured with water as per standard specification and sealing of joints using sealing compound complete as per specifications and as directed by engineer in charge.	SQM	3301		
502	Providing and laying <b>chequered concrete tiles</b> over water proofing of minimum size 200 X 200 and minimum thickness 22 mm conforming to IS 13801 including 15 mm thick cement mortar (1:4) bedding. (water proofing paid else where)	SQM	230		
503	Providing minimum two coats of bituminous paint on concrete surfaces in contact with soil in water retaining structures, of grade 85/25 conforming to IS: 702 @ 1.7 kg/sqm.	SQM	40743		

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504	Providing and <b>mixing</b> approved <b>water proofing compound</b> in concrete or cement mortar for works wherever specified or directed as per specification/manufacturer's instructions, testing of samples for water proofing etc. complete.	KG	4725		
600	<b>SUPPLYING &amp; INSTALLATION OF JOINT FILLER AND SEALING COMPOUND:</b>				
601	Supplying & installation of bitumin impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin, labour, material, equipments etc all complete at all levels as per specification, drawings and instruction of engineer in charge:				
a	12mm thick joints.	SQM	55		
b	20mm thick joints.	SQM	55		
c	25mm thick joints.	SQM	55		
d	50mm thick joints.	SQM	28		
700	<b>M.S. EMBEDMENTS</b>				
701	<b>Supply, fabricating and fixing of embedments,</b> MS inserts, pipe sleeves, guide rails, angle pieces, foundation bolts, anchor bolts, rungs of various diameters, plates of dimensions as required including cost of all labour, materials and equipment, transportation, loading, unloading, handling, welding, rivetting, bolting, cutting, drilling, scaffolding and setting as per specifications and drawings. Steel shall be supplied free of cost as per Clause 39.	MT	4		
702	Fixing of <b>embedments, MS inserts, pipe sleeves, rails, guide rails</b> angle pieces, anchor bolts of various diameters, plates of dimensions as required including cost of all labour, materials and equipment for fixing in position, scaffolding and setting in position, transportation from stores within the plant boundary to work spot, loading, unloading etc. complete as per specifications and drawings.	MT	2		
800	<b>GROUTING AS PER SPECIFICATION FOR THE FOLLOWING:</b>				

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801	Providing & grouting cement slurry mix at any elevation/depth with pressure pump for water retaining concrete structures, including fixing nozzles, cost of approved cement, admixture, curing, etc all complete as per specification and as directed by the Engineer.	SQM	2		
802	Providing and grouting of pocket holes, pipe sleeves of any shape and size under base plates after erection of necessary structural steel work, machinery with mix 1:1:2 (one part Cement : 1part Sand : 2 parts of 6mm down graded stone chips) at any elevation including roughening surface, cleaning, ramming, curing etc complete (non-shrink hand grout using approved admixture) as per specification and as directed by the Engineer.	CUM	2		
900	DOORS, WINDOWS, VENTILATORS, LOUVERS, ROOF VENTILATORS, ROLLING SHUTTERS, PARTIONS ETC. COMPLETE AT ALL ELEVATION INCLUDING FRAMING, KICK PLATES, STOPPERS AS PER SPECIFICATION AND DRAWINGS (all steel doors, windows and rolling shutters etc.shall be blast cleaned to near white metal surface (Sa 2 1/2), painted with two coat of red oxide zinc primer and finished with two coats of synthetic enamel paint confirming to IS2074)				
901	Providing, fitting and fixing <b>solid core flush door</b> shutter as per IS2202 part II, 35 mm thick homogeneous particle board (decorative veneer prelaminated on both sides) bonded with BWP type phenol formaldehyde synthetic resin, particle board core conforming to IS3087 type I, 35/12 mm thick teak wood beading all around including preparation of working drawings, butt hinges, tower bolt, sliding bolt handles, knobs, door stoppers (all fitting shall be anodised aluminium color dyed), screws etc complete as per drawing, specification and instructions of engineer in charge.	SQM	17		
902	Providing and fixing openable/fixed <b>steel windows and ventilators</b> with steel sections as per IS:1361 including wire mesh, painting with minimum 2 coats of synthetic enamel paint on primer complete.	SQM	566		



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903	Providing and fixing <b>steel single or double door</b> shutters. Shutters shall be 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers side, top, bottom edges of shutter shall be of pressed steel channels of 1.2mm thk voids to be filled with mineral wool (48 kg/cum density) including all fittings like tower bolts, handles, stoppers, aldrops etc. and painting with minimum 2 coats of synthetic enamel paint on primer complete.	SQM	84		
905	Providing and fixing anodised aluminium work for doors, windows, ventilators and partitions 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, screws or with fixing clips, including necessary fillinf of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-mettalic protection etc.	KG	11383		
	including preperation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/panelling, 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).				
906	Providing and fixing of <b>over head hydraulic door closers</b> of approved make & quality as directed by Engineer.	Nos	37		
908	Providing and fixing pressed <b>steel frames</b> fabricated from 1.6 mm thk gauge M.S sheet mortised, reinforced strikes, hold fasts, adjustable floor anchors, floor tiles/weather bars etc. complete as per specifications.	KG	459		

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909	Providing and fixing in position <b>rolling shutters</b> of approved make as per IS 6248, made of 80x1.25mm M.S laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pip	SQM	47		
i)	Made of anodised aluminium sections	Kg	1763		
913	Providing, fitting and fixing of glazing including poly carbonate sheet of superior (selected) quality, first grade class, at various elevations, where required, cleaning after fixing, with all labour and material etc. complete as per specification, drawing and instructions of engineer in charge.				
iii)	5.5 mm clear float glass	SQM	615		
iv)	6 mm wired glass	SQM	130		
vi)	5.5 mm tinted glass	SQM	780		
914	Providing, fitting and fixing heavy duty minimum six lever mortised <b>lock</b> of godrej or equivalent make with handles or knobs to single and double leaf door (wooden/steel/aluminium) with duplicate set of keys and masterkeyed locks, openable from one side by the key and from the other side by the handle etc. all complete as per drawing, specification and instruction of engineer in charge.	Each	18		
915	Providing and fixing <b>PVC doors</b> of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	37		
916	Providing and fixing in position of 25 mm wide aluminum Venetian blinds of approved shade with aluminum extruded duly epoxy powder coated top channel including mechanism etc complete as per specifications, drawing and instruction of engineer in charge	SQM	551		
<b>1000A</b>	<b>BLOCK WORKS MASONRY INCLUDING SUPPLY OF MATERIAL, COST OF LABOUR, SCAFFOLDING ETC. COMPLETE AS PER SPECIFICATIONS, DRAWING AND AS DIRECTED BY ENGINEER FOR THE FOLLOWING:-</b>				

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<b>1001A</b>	Providing <b>and laying 250mm thick double wall block work in cement mortar 1:6</b> (1cement : 6 coarse sand) consisting of two layers of hollow concrete block 100mm each with 50mm air gap in between the layer for walls, chambers etc. at all heights, places and position above plinth including raking out joints, curing, scaffolding, etc complete but excluding plastering and painting, having compressive strength of 10N/mm <sup>2</sup> manufactured as per approved methodology and as per specification.	CUM	450		
<b>1003A</b>	Providing and <b>laying 200mm</b> thick block work in cement mortar 1:6 (1cement : 6 coarse sand) consisting of 200mm hollow concrete block for walls, chambers etc. at all heights, places and position above plinth including raking out joints, curing, scaffolding, etc complete but excluding plastering and painting, having compressive strength of 10N/mm <sup>2</sup> manufactured as per approved methodology and as per specification.	CUM	450		
<b>1004A</b>	Providing and laying <b>150mm thick block work in cement mortar 1:6</b> (1cement : 6 coarse sand) consisting of 150mm hollow concrete block for walls, chambers etc. at all heights, places and position above plinth including raking out joints, curing, scaffolding, etc complete but excluding plastering and painting, having compressive strength of 10N/mm <sup>2</sup> manufactured as per approved methodology and as per specification.	CUM	3366		
<b>1000</b>	<b>BRICKWORK MASONRY INCLUDING SUPPLY OF MATERIAL, COST OF LABOUR ETC. COMPLETE, AS PER SPECIFICATIONS. CONTRACTOR WILL HAVE TO SET UP A BRICK MANUFACTURING UNIT OF CAPACITY SUITABLE FOR ALL BRICKWORK ACTIVITIES OF THE ENTIRE PACKAGE. THE UNIT SHALL BE SET UP AS PER SPECIFICATION.</b>				
<b>1001</b>	Providing <b>brick work</b> in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc. in thickness varying from 230mm to 460mm at all depths, places and positions <b>below plinth</b> including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.				

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i)	Using <b>ordinary bricks</b> of class designation 7.5 of nominal dimension	CUM	1142		
1002	Providing <b>brick work</b> in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position <b>above plinth</b> including raking out joints, curing, scaffolding etc complete excluding plastering and painting.				
i)	Using <b>ordinary bricks</b> of class designation 7.5 of nominal dimension	CUM	269		
1004	Providing <b>brick work</b> in cement <b>mortar 1:4</b> (1 cement 4 coarse sand) in <b>partition walls</b> , chambers etc. in thickness 115mm at all heights, places and position above or below plinth/graded level including providing H.B. wetting at every third layer, raking out joints, curing, scaffolding etc complete excluding plastering and painting as per specification.				
i)	Using <b>ordinary bricks</b> of class designation 7.5 of nominal dimension	SQM	398		
<b>1100</b>	DAMP PROOF COURSE INCLUDING ALL MATERIALS, LABOUR, SHUTTERING, CENTERING, CURING ETC., COMPLETE WITH THICKNESS AS SPECIFIED/SHOWN ON DRAWINGS.				
1101	<b>Damp Proof Course</b> 50mm thk. 1:1.5:3 concrete (10mm down aggregate) with 2% of approved admixture of water proofing compound. Hot bitumen @ 1.7Kg./sqm shall be applied before & after the DPC as per specification.	SQM	1651		
<b>1200</b>	CEMENT MORTOR PLASTER INCLUDING ALL MATERIALS SCAFFOLDING, CURING ETC. COMPLETE AS PER SPECIFICATION				
1201	Providing <b>12 mm thick</b> plaster in cement mortar <b>1:6</b> on walls, finished to a <b>smooth finish</b> as per specification and conforming to IS 1661	SQM	27478		

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1204	Providing <b>18 mm</b> thick plaster in two layers in cement mortar <b>1:6</b> on walls finished to a <b>wooden float/smooth/rough finish</b> as per specification and conforming to IS 1661	SQM	26097		
1205	Providing <b>6mm</b> thick plaster in cement mortar <b>1:4 on ceilings</b> finished to a smooth finish as per specification.	SQM	2814		
1207	Providing <b>Plaster of Paris</b> 2 mm thick punning over finished plaster surface and finished with smooth surface as per specification.	SQM	3534		
1208	Providing <b>screed/grading plaster</b> of average 20 mm thickness in ratio 1:6 nominal by volume including finishing smooth and even etc. all complete at all levels above or below grade level.	SQM	184		
1208-3	Providing drip course on plastered surface at all elevations for all type of work such as chajjas, parapet, projections etc. including scaffolding, finishing etc. complete with all labour, tools and plants as per specification, drawing and instructions of engineer in charge.	RM	657		
<b>1300</b>	<b>FINISHES, PAINTING TO CONCRETE, PLASTERED SURFACES, SURFACE PREPARATION INCLUDING ALL MATERIALS, LABOUR, SCAFFOLDING ETC. ALL COMPLETE</b>				
1302	Two or more coats of <b>white wash/ colour wash</b> as per IS 627 of approved brand and manufacture to give an even shade including a priming coat as per specifications.	SQM	734		
1303	Providing and applying two or more coats of <b>oil bound distemper</b> as per IS 428 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline including plaster of paris punning minimum 2 mm.	SQM	1928		
1304	Two or more coats of <b>dry distempering</b> of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete.	SQM	459		

	<b>4X125 MW KOSTI Thermal Power Plant</b>	<b>RATE SCHEDULE CUM BILL OF QUANTITIES</b>			
		<b>TOTAL CIVIL WORKS FOR ROADS / DRAINS / UTILITY BUILDINGS PACKAGE</b>			
<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
1309	Providing and applying two or more coats of <b>acrylic emulsion paint</b> as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline	SQM	3551		
1312	Providing and applying 2 or more coats of <b>water proof cement paint</b> of approved make and color on exterior surface at all heights including material, labour, scaffolding, curing etc complete as per specification.	SQM	5678		
<b>1400</b>	<b>FLOORING AND SKIRTING INCLUDING ALL MATERIALS, LABOUR, CURING, POLISHING, FINISHING, EXPANSION JOINTS, GROOVES, ETC. COMPLETE IN ALL RESPECTS AS SHOWN ON DRAWINGS AND DESCRIBED IN SPECIFICATIONS. (Under bed to be paid seperately under relevant item)</b>				
1401	Providing and laying 40 mm thick <b>heavy duty cement concrete flooring</b> with <b>metallic hardener pigmented topping</b> of 12 mm thick uniform graded treated iron particles <b>in flooring complete as per specification.</b>	SQM	2213		
1402	Providing and laying 25 mm thick heavy duty cement concrete flooring with metallic hardener pigmented topping of 10 mm thick uniform graded treated iron particles <b>in skirting and dado complete as per specification.</b>	SQM	89		
1403	Providing and laying <b>heavy duty ceramic industrial floor tiles</b> of 25 mm thickness of approved size & shade as per IS 4457, <b>laid in floors and landings</b> , laid over a bed of acid resistant mortar 1:3 (1 acid resistant mixture & 3 clean sand) 25mm thick, of make "somany"/ 'kajaria' or equivalent jointed with neat cement slurry with pigment to match the shade of the tiles including rubbing and polishing complete.	SQM	95		
1404	Providing and Laying Precast Terrazo tiles including preparation of underbed all complete as per specifications	SQM	829		

	<b>4X125 MW KOSTI Thermal Power Plant</b>	<b>RATE SCHEDULE CUM BILL OF QUANTITIES</b>			
		<b>TOTAL CIVIL WORKS FOR ROADS / DRAINS / UTILITY BUILDINGS PACKAGE</b>			
<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
1412	Providing and laying <b>polished Kota stone</b> 20 mm thk in <b>flooring</b> . The kota stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. complete.	SQM	643		
1413	Providing <b>polished Kota stone</b> 20 mm thk in <b>skirting</b> projecting 6mm from adjacent plaster all complete .	SQM	110		
1414	Providing and laying <b>polished Granite stone</b> of approved color and texture <b>25 mm thk</b> and 600x600 size in flooring with brass dividers of 30x6 mm size at 1.8mx 1.8m intervals. The granite stone slabs/tiles laid over under bed of cement sand mortar (1:3) 15mm thick, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. complete .	SQM	165		
1415	Providing and laying <b>polished Granite stone 20 thk</b> in <b>skirting, facia and dado</b> including pigments, curing, grinding, granite polishing etc. complete.	SQM	5		
1416	Providing and laying 7 mm thk <b>vitrified ceramic tiles of polished variety</b> of size 300x300 from reputed manufacturer, complete as per specification.	SQM	678		
1419 A	Providing and fixing white glazed tiles from reputed manufacturer all complete as per specifications	SQM	606		
1425	Providing and laying of <b>PVC flooring</b> & skirting of minimum thickness 2 mm anti static flexible tiles as per IS 3462 and IS 5318.	SQM	47		
1427	Providing and laying <b>cinder filling</b> in the toilets complete as directed by engineer in charge.	CUM	33		

	<b>4X125 MW KOSTI Thermal Power Plant</b>	<b>RATE SCHEDULE CUM BILL OF QUANTITIES</b>			
		<b>TOTAL CIVIL WORKS FOR ROADS / DRAINS / UTILITY BUILDINGS PACKAGE</b>			
<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
1501	Designing, providing and fixing permanently color coated galvanised <b>MS troughed metal sheet decking</b> plate over roof purlins as per relevant IS code and specification. Thickness of deck plate shall be minimum 1.2mm (base metal excluding coating), with minimum trough depth of 38 mm, with minimum yeild strength of 240Mpa and shall serve as permanent shuttering to the cast-in-situ roof slab 100mm thick measured over crest of metal decking & shall have adequate strength to support weight of green concrete and imposed loads during construction spanning between purlins as per manufacturer's recommendations/ calculations/ test certificates for approval including fixing of plates to purlins, side lapping, end lapping etc.complete as per engineers approval and specification. (height of trough required as per design should be included in the cost). M.S. Trough decking plate shall be connected to the top surface of the purlin, top chord of truss with self tapping self drilling white zinc plated heat treated high carbon steel screws of min 5.6mm diameter at spacing of 390mm C/c in the trough a	SQM	1518		
	sealant including all material, labour, tools, etc complete. In addition shear connector of 16mm dia and min 75mm long mild steel studs at spacing 520mm C/c shall be fixed on top cord of purlin passing through the metal decking. (Note:-Leak proofing of the metal decking and concrete system shall be demonstrated by the contractor). Measurement shall be of the plan area of roof covered by MS trough metal decking.				
1600	PROVIDING AND FIXING FALSE CEILING INCLUDING SUPPLY OF CEILING MATERIAL, WORKING LAYOUT DRAWINGS AND DETAILS, SUSPENSION SYSTEM AND ALL OTHER MATERIALS REQUIRED FOR THE WORK INCLUDING MAKING RECESS FOR LIGHT FIXTURES, ALUMINIUM DIFUSERS, FIRE ALARMS ETC., POLISHING/PAINTINGS, LABOUR ETC., ALL COMPLETE AS PER SPECIFICATION.				



	<b>4X125 MW KOSTI Thermal Power Plant</b>	<b>RATE SCHEDULE CUM BILL OF QUANTITIES</b>			
		<b>TOTAL CIVIL WORKS FOR ROADS / DRAINS / UTILITY BUILDINGS PACKAGE</b>			
<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
1601	Providing and fixing glass reinforced gypsum (GRG) ceiling system consisting of 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.				
i)	12 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat.	SQM	1433		
ii)	12 mm thick GRG board in profile (dome etc.) with galvanised light gauge steel load bearing supporting GI frame and finished flat.	SQM	69		
1700	PROVIDING AND FIXING RAIN WATER DOWN TAKE PIPES INCLUDING 2 COATS OF APPROVED PAINT OVER A PRIMARY COAT, ALL SPECIALS AND ACCESSORIES ETC. COMPLETE AS PER SPECIFICATION.				
1701	<b>GI</b> down take pipes conforming to IS1239/IS3589 as per specification of following dia.				
ii)	150 mm dia	RM	710		
1702	<b>CI</b> down take pipes conforming to IS1230 with lead joints as per specification of following dia.				
ii)	150 mm dia	RM	64		
1800	<b>MISCELLANEOUS</b>				
1802	Supplying and installation of <b>25mm thick vibration damping, resilient pads</b> around foundation of vibrating equipment and other locations as directed by the Engineer-in-charge including cost of all materials labour equipment etc. complete as per drawing and specifications.	SQM	165		

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		<b>TOTAL CIVIL WORKS FOR ROADS / DRAINS / UTILITY BUILDINGS PACKAGE</b>			
<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
1809	Providing and fixing <b>weep holes</b> in Drains consisting of 100 mm dia LDPE pipe sleeves along with single side covering for the pipe mouth with galvanised welded wire fabric of 20 mm sq. opening along with 300 X 300 mm sq., 300 mm deep, 40 mm aggregates to cover fabric mesh mouth complete as directed by engineer in charge.	Nos.	225		
2000	<b>FENCING AND GATES.</b>				
2001	Supplying and erecting in position 2.5 m high <b>PVC coated gavanised chain linked fencing</b> of minimum 8 gauge (including PVC coating ) of mesh size 75 mm and galvanised concertina . The diameter of the steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. GI barbed wire fencing confirming to IS 298 at top of chain link fencing shall be provided with 4 stands of height of 600 mm including all accesories as per specification all complete.	SQM	15120		
2003	Supply, fabrication and installing in position and testing galvanised <b>MS Gates</b> out of channels, joists, angles, flats, plates, pipes & sheets including stiffeners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, ball bearing arrangements, castor wheels,etc. all complete as per drawing, specification and as directed by Engineer-in-charge with 600mm high GI barbed wire fencing at top all complete.	MT	4		
2100	<b>WATER SUPPLY</b>				
2101	Providing and fixing in position tested heavy duty type <b>chromium plated brass long neck bib cocks</b> including sockets, union, nut etc. complete <b>15mm nominal bore.</b>	NO.	18		
2102	Providing and fixing in <b>position heavy duty brass stop cock</b> of approved quality including all specials etc. complete as directed by Engineer <b>15mm nominal bore.</b>	NO.	18		
2103	Providing and fixing in position heavy duty <b>brass full way valve</b> with wheel of approved quality <b>25mm nominal bore.</b>	NO.	18		
2104	Providing and fixing in position heavy duty <b>brass full way valve</b> with wheel of approved quality <b>50mm nominal bore.</b>	NO.	12		

	<b>4X125 MW KOSTI Thermal Power Plant</b>	<b>RATE SCHEDULE CUM BILL OF QUANTITIES</b>			
		<b>TOTAL CIVIL WORKS FOR ROADS / DRAINS / UTILITY BUILDINGS PACKAGE</b>			
<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
2105	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. and clamps including cutting and making good the walls etc. complete (internal work) <b>15 mm nominal bore.</b>	RM	37		
2106	Providing and fixing <b>GI pipes</b> complete with GI fittings a clamps including cutting and making good the walls etc. complete (internal work) <b>20 mm nominal bore.</b>	RM	46		
2107	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. and clamps including cutting and making good the walls etc.complete ( <b>internal work</b> ) <b>25 mm nominal bore (N.B).</b>	RM	46		
2108	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. including trenching & refilling anti-corrosive paint etc. complete ( <b>external work</b> ) <b>15mm nominal bore (N.B).</b>	RM	46		
2109	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. including trenching & refilling anti-corrosive paint etc.complete ( <b>external work</b> ) <b>20mm nominal bore (N.B).</b>	RM	46		
2110	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. including trenching & refilling anti-corrosive paint etc.complete ( <b>external work</b> ) <b>25mm nominal bore (N.B).</b>	RM	46		
2111	Providing and fixing <b>GI pipes</b> complete with GI sockets, unions, elbows, tees, nipples etc. including trenching & refilling anti-corrosive paint etc.complete ( <b>external work</b> ) <b>50mm nominal bore (N.B).</b>	RM	46		
2112	Providing and fixing <b>610mmx453mmx5mm thk mirror</b> from reputed mirror manufacturer. Mirror shall be mounted with glass adjustable revolving CP brackets etc. complete with CP screws as per specification.	NO.	18		
2113	Providing and fixing <b>610mmx127mmx6mm thk clear glass</b> with <b>C.P Guard rails</b> and mounted on C.P. brackets etc. complete as per specification.	NO.	29		

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<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
2114	Providing and fixing <b>20mm dia</b> chromium plated M.S. pipes wall mounted <b>towel rod</b> with C.P. brackets etc. all complete as per specification.	NO.	29		
2115	Providing and fixing <b>C.P. soap holder</b> mounted with C.P. screws etc.complete as per specification.	NO.	32		
2116	Providing and fixing <b>C.P. liquid soap dispenser</b> . Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc.complete as per specification.	NO.	29		
2117	Providing and fixing glazed vitreous wall mounted <b>paper holder</b> with suitable cover cum cutter fitted with CP screws etc. complete as per specification	NO.	29		
2118	Providing and fixing <b>chromium plated brass shower</b> rose with 15 or 20 mm inlet all complete.	No.	18		
2119-1	Providing & fixing <b>P.V.C. /Polyethylene water tank</b> (Syntex or equivalent) in position of <b>5000 litres</b> capacity conforming to IS 12701. The work to including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc. all complete as per specification at all heights and levels	NO.	3		
2119-2	Providing & fixing <b>P.V.C. /Polyethylene water tank</b> (Syntex or equivalent) in position of <b>2000 litres</b> capacity conforming to IS 12701. The work to including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc. all complete as per specification at all heights and levels	NO.	5		
2119-3	Providing & fixing <b>P.V.C. /Polyethylene water tank</b> (Syntex or equivalent) in position of <b>500 litres</b> capacity conforming to IS 12701. The work to including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc. all complete as per specification at all heights and levels	NO.	6		
2119-4	Providing & fixing <b>P.V.C. /Polyethylene water tank</b> (Syntex or equivalent) in position of <b>1000 litres</b> capacity conforming to IS 12701. The work to including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc. all complete as per specification at all heights and levels	NO.	4		
2200	<b>SANITARY WORKS</b>				

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		<b>TOTAL CIVIL WORKS FOR ROADS / DRAINS / UTILITY BUILDINGS PACKAGE</b>			
<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
2201	Supply and fixing <b>vitreous china wash basin</b> size 600x450 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, cutting and making good the walls where required etc. complete as per specifications	NO.	18		
2202	Providing and fixing approved <b>vitreous china acid/alkali resistant laboratory sink</b> of size 600x450x200mm with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 40mm, CP brass waste and 40mm CP brass bottle trap with necessary union complete including painting the fittings, cutting and making good the wall where required as per specification.	NO.	6		
2203	Providing and fixing colour <b>European type water closet</b> with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre glazed stone water flushing cistern with valveless fittings, necessary C.P connections etc. complete as per specification.	NO.	15		
2204	Providing and fixing Orissa type <b>glazed vitreous china pan</b> conforming to IS2556 ( Part 3)with foot rests and high level 12.5 litre C.I flushing cistern with valveless fittings, necessary C.P connections, foot rests shall be made of white glazed vitreous china with chequered surface allcomplete with cistern painting, C.I brackets etc. as per specification.	NO.	13		
2205	Providing and fixing wall type <b>glazed vitreous china urinals</b> with C.I automatic flushing cistern approximately once every five minutes for every four urinals (max.) with flush pipes, lead pipes, gratings, CP bottle traps and necessary C.P fittings all complete as per specifications.	NO.	23		
2206	Supply, laying and jointing <b>75mm dia heavy duty cast iron pipes</b> including bends, branches and all other necessary fittings, lead cocking, a coat of bitumenous paint, M.S holder bats/clamps, cutting and making good the walls and floors	RM	42		

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2207	Supply, laying and jointing <b>100mm</b> dia heavy duty <b>cast iron pipes</b> including bends, branches and all other necessary fittings, lead caulking, a coat of bitumenous paint, M.S holder bats/clamps, cutting and making good the walls and floor	RM	19		
2208	Supply, laying and jointing <b>150mm</b> dia heavy duty <b>cast iron pipes</b> including bends, branches and all other necessary fittings, a coat of bitumenous paint, M.S holder bats/clam lead caulking, a coat of bitumenous paint, M.S holder bats/clamps	RM	5		
2209	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>150mm</b> dia, as per specifications.	RM	392		
2210	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>200mm</b> dia, as per specifications.	RM	45		
2211	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>250mm</b> dia, as per specifications.	RM	45		
2212	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>300mm dia</b> , as per specifications.	RM	45		
2213	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>500mm dia</b> , as per specifications.	RM	45		
2214	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. complete <b>600mm dia</b> , as per specifications.	RM	23		

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<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
2216	Providing, laying light duty non pressure <b>NP2 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc. as per specifications for dia:				
i)	150mm	RM	45		
ii)	250mm	RM	45		
iii)	300mm	RM	45		
iv)	400mm	RM	45		
v)	500mm	RM	45		
vi)	600mm	RM	45		
vii)	750mm	RM	45		
2218	Providing and fixing <b>C.I Manhole cover</b> of size <b>600mmx450mm</b> including frame from reputed manufacture all complete as per specifications.	NO.	2		
2219	Providing and fixing circular heavy duty <b>man hole cover of 600mm</b> dia with frame all complete as per specification.	NO.	2		
2220	Providing and fixing <b>square mouth S.W Gully trap</b> grade 'A' complete with CI grating, brick masonry chamber and watertight CI grating, brick masonry chamber and water tight CI cover with 300x300mm (inside) the weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg as per drawing and specifications etc. all complete size <b>100x100mm</b> P or S Type.	NO.	3		
2221	Providing and fixing square mouth <b>S.W Gully trap</b> grade 'A' complete with CI grating, brick masonry chamber and watertight CI grating, brick masonry chamber and water tight CI cover with 300x300mm (inside) the weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg as per drawing and specifications etc. all complete size <b>150x100mm</b> P or S Type.	NO.	3		
2222	Providing and fixing square mouth <b>S.W Gully trap</b> grade 'A' complete with CI grating, brick masonry chamber and watertight CI grating, brick masonry chamber and water tight CI cover with 300x300mm (inside) the weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg as per drawing and specifications etc. all complete size <b>150x150mm</b> P or S Type.	NO.	2		

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2223	Providing and fixing <b>C.I. floor traps with C.P jalli</b> complete as per specification.	NO	2		
2224	Providing and installing approved brand single tap <b>water cooler</b> of <b>80 L</b> cooling capacity complete in all respect.	NO.	5		
2225	Providing and installing approved brand single tap <b>water cooler</b> of <b>150 L</b> cooling capacity complete in all respect.	NO.	5		
2226	Providing and fixing white vitreous <b>urinal partitions</b> all complete as per specification.	NO.	4		
<b>2300</b>	<b>STRUCTURAL STEEL WORKS</b>				
2301	Supply,fabrication, erection, alignment, welding, primer painting (primer coat consisting of 2 coats of redoxide zinc-chromate as per IS:2074 & IS:1477 (Parts I & II). One coat to be applied at shop and the other after erection ) of structural steel made from mild steel conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS: 3052 and mild steel rounds, at all elevations involving rolled sections (including mild steel rounds), built up sections fabricated out of plates, rolled sections and combination of plates and rolled sections, in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, shear connectors, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, diaphragm, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails (G.I.), toeplates, MS Rungs, insert plates, edge angles,	MT	267		



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<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
	embedments, lugs,posts, stays, louvers, lacings, gusset plates, safety chains for walkways adjacent to crane girders etc, collection of steel from stores, transportation, straightening, making cutting plan, cutting, bending, rolling, grinding, drilling, bolting, erection bolts & nuts (weight erection bolts & nuts not payable, Supply of permanent bolt of grade C mild steel bolts & nuts to be paid separately under ST NO. 2310 (i)), assembly, edge preparation, preheating(& use of low hydrogen/ radiogenic electrodes as per specification), post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporary structures (Scaffolding, Access ladders, Working Platforms etc.), setting column bases, surface preparation, touch-up painting, dismantling and removal of all temporary structures (weight of temporary structures not payable) complete with all				
	labour, material, electrodes and other consumables, equipment, testing (mechanical and non- destructive), preparation of fabrication drawings, joint design calculations and all other general and special requirements, all other activities required for completion of the work including return of surplus/ waste steel materials to store etc. as per specification, drawings and instructions of the Engineer. Steel shall be supplied free of cost as per Clause 39.				
2304	Treatment of structural steel complete including surface preparation, painting etc complete as per attached write up, specification, drawings and instructions of the Engineer.	MT	41		
2400	<b>ROAD WORK INCLUDING SUPPLY OF MATERIAL, COST OF LABOUR, MACHINERY ETC ALL COMPLETE AS PER SPECIFICATION, DRAWING, RELEVANT IRC &amp; IS CODES AND AS DIRECTED BY THE ENGINEER-IN-CHARGE FOR THE FOLLOWING.</b>				

	<b>4X125 MW KOSTI Thermal Power Plant</b>	<b>RATE SCHEDULE CUM BILL OF QUANTITIES</b>			
		<b>TOTAL CIVIL WORKS FOR ROADS / DRAINS / UTILITY BUILDINGS PACKAGE</b>			
<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
2401	<b>Preparation of sub grade by excavating earth</b> to required depth <b>in all type of soils</b> including ash, laterite, morrum etc, dressing to camber and consolidating the base including making good the undulation and stacking/disposal of surplus excavated material within a lead of 1.0km etc all complete.	CUM	32130		
2402	<b>Preparation of sub grade by excavating earth</b> to required depth <b>in soft rock</b> including weathered rock which can be excavated by means of crow bar, pick axe etc but does not require chiselling or blasting , dressing to camber and consolidating the base including making good the undulation stacking/ disposal of surplus excavated material within a lead of 1.0km etc all complete.	CUM	4590		
2403	<b>Extra over item no. 2401 &amp; 2402</b> for disposal of surplus excavated earth beyond an initial lead of 1km and upto a lead of 5km.	SQM	9180		
2404	<b>Providing, stacking and laying granular morrum for shoulder</b> including watering, compaction with road roller to required degree and finishing to required level, slope/camber etc all complete.	RM	5838		
2405	<b>Providing &amp; laying water bound macadam sub base course</b> in layers of required thickness with crushed stone aggregates of <b>90 to 40 mm size</b> , stone screenings and binding material including screening, sorting, spreading to template and consolidation with road roller including carriage, spreading and consolidation of binding material moorum etc including cost of material, labour all complete.	RM	14927		
2406	<b>Providing &amp; laying water bound macadam base course</b> in layers of required thickness with stone aggregates of <b>63mm to 40mm size</b> , stone screenings and binding material including screening, sorting, spreading to template and consolidation with road roller including carriage, spreading and consolidation of binding material moorum etc including cost of material, labour all complete.	CUM	11934		

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<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
2407	<b>Providing &amp; laying water bound macadam base course</b> with stone aggregates of <b>50mm to 20mm size</b> , stone screenings and binding material including screening, sorting , spreading to template and consolidation with road roller including carriage, spreading and consolidation of binding material moorum etc including cost of material, labour all complete.	CUM	2993		
2408	<b>Providing and applying tack coat</b> of low viscosity liquid bitumen of suitable approved grade confirming to IS:73, 217 or 454 as applicable @ 10 kg/10sqm on untreated WBM surface including scraping, cleaning with compressed air etc all complete.	CUM	29268		
2408A	<b>Providing and applying tack coat</b> of low viscosity liquid bitumen of suitable approved grade confirming to IS:73, 217 or 454 as applicable @ 5 kg/10sqm on untreated WBM surface including scraping, cleaning with compressed air etc all complete.	SQM	29268		
2409	<b>Providing, mixing and laying bituminous macadam course</b> of compacted 75mm thickness with bitumen of a suitable grade complying with IS 73 and aggregates, binder material as specified in specification including hot mixing, hot laying, rolling etc all complete.	RM	59707		
2410	<b>Providing, mixing and laying premix carpet</b> ( as per IRC-14 ) of compacted 25mm thickness in a single course composed of suitable small size aggregates premixed with a bituminous binder on a prepared base as per specification including rolling etc all complete.	RM	59670		
2411	<b>Providing and applying liquid seal coat</b> comprising of an application of a layer of bituminous binder at the rate of 9.8kg/10sqm followed by a cover of stone chips at the rate of 0.09 cum/10sqm including rolling etc as per specification all complete.	SQM	59716		
2412	<b>Providing, laying and fixing 400mm long x 150mm thick x 350mm deep precast concrete kerb stone blocks</b> of approved pattern with concrete grade M20 using 20mm down size aggregates as per drawing including fixing in 13mm thick cement sand mortar 1:2 in joints, finishing the joints with neat cement paste, making drainage openings wherever required etc all complete.	SQM	2777		

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<b>ST. NO</b>	<b>DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE IN USD</b>	<b>AMOUNT IN USD</b>
2413	<b>Providing, laying and fixing brick on edge</b> with bricks having a minimum crushing strength of 75 kg/cm <sup>2</sup> for edge protection including fixing in 13mm thick cement mortar 1:6 complete.	RM	19439		
2801	<b>Landscaping / Greenbelt development:</b>  Landscaping will consist of green belt development including plantation / development of grass, bushes, flowers, planting of trees along the boundary wall at a distance of approximately 5.0M.	SQM	15000		
<b>TOTAL AMOUNT IN USD</b>					

**NOTES:**

1	In case of omission in quoting any rate, the evaluation will be done considering the highest quoted rate obtained against that item but the work, if awarded, will be on the lowest quoted rate obtained against that item.
2	The rate shall be entered in figures as well as in words. In case of difference in rates between words and figures, the lesser of the two will be treated as valid rate.
3	The bidders shall enter both 'Unit Rate' & 'Amount'. In case of any mismatch between 'Total Amount based on Unit Rate' & 'Total Amount as quoted', the lower of the two shall be considered for evaluation and award.
4	The quantities indicated against each item above are tentative and are liable to vary depending upon the site requirement. The contractor has to supply / install actual quantities as per advice of BHEL Engineer and accordingly the final contract price shall be adjusted on the basis of quantities actually erected at site & payment will also be regulated accordingly for the same. The contractor confirms that unit rate quoted above takes care of such variations during execution stage.
5	Evaluation of the bids shall be done based on total price against this BOQ.
6	<b>Unit Rate' as well as 'Amount' against each item to be quoted in US Dollars (USD) only.</b>