

| All civil and Architectural works required for Coal Handling Plant AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana. | | | | |
|--|--|------|-----------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 100 EARTH WORK | | | | |
| | Earth work In excavation, backfilling and disposal including necessary men/women, materials, equipment, loading, transportation, unloading, dewatering etc as per specification, drawing and as directed by engineer- in-charge for the following. | | | |
| 101 | Earth work in excavation in all types of soil including ash which can be excavated by any means including setting out, levelling, dewatering (but excluding special type of dewatering viz. well point method), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading/levelling of disposed materials etc all complete for following depths below ground level. | | | |
| a | Depth from ground level but not exceeding 2 m | CUM | 166933.00 | 2.06398579 |
| b | Depth exceeding 2 m but not exceeding 4 m | CUM | 110591.00 | 1.85963487 |
| c | Depth exceeding 4 m but not exceeding 6 m | CUM | 43942.00 | 0.96168079 |
| d | Depth exceeding 6 m but not exceeding 8 m | CUM | 187.00 | 0.00601177 |
| 103 | Earth work in excavation in soft rock (rock without any recovery of excavated materials in the form of hard stone/boulder) including weathered rock which can be excavated by means of crow bar, pick axe, pneumatic rock breaker attachment with excavator machine etc but does not require chiselling or blasting including setting out, levelling, dewatering (wherever required), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading / levelling of disposed materials etc all complete for following depths below ground level. | | | |
| a | Depth from ground level but not exceeding 2 m | CUM | 3313.00 | 0.06021775 |
| b | Depth exceeding 2 m but not exceeding 4 m | CUM | 3313.00 | 0.09503619 |
| c | Depth exceeding 4 m but not exceeding 6 m | CUM | 41504.00 | 1.41639728 |
| d | Depth exceeding 6 m but not exceeding 8 m | CUM | 42006.00 | 1.63090181 |
| e | Depth exceeding 8 m but not exceeding 10 m | CUM | 35484.00 | 1.49173502 |
| f | Depth exceeding 10 m but not exceeding 15 m | CUM | 25017.00 | 1.28989468 |
| g | Depth exceeding 15 m but not exceeding 20 m | CUM | 10012.00 | 0.60406534 |

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| h | Depth exceeding 20 m but not exceeding 25 m | CUM | 3267.00 | 0.22972720 |
| 104 | Earth work in excavation in hard rock requiring blasting (but excluding controlled blasting) including wedging, line drilling, pre shearing etc as required, setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, necessary licenses/statutory clearances for blasting, supply, storage & handling of blasting materials, stacking/disposal of surplus excavated material within a lead upto 500m, spreading / levelling of disposed materials etc all complete for following depths below ground level. | | | |
| f | Depth exceeding 10 m but not exceeding 15 m | CUM | 2840.00 | 0.18505993 |
| g | Depth exceeding 15 m but not exceeding 20 m | CUM | 5139.00 | 0.38895995 |
| h | Depth exceeding 20 m but not exceeding 25 m | CUM | 3267.00 | 0.27988785 |
| l | Depth exceeding 25 m but not exceeding 30 m | CUM | 100.00 | 0.00959801 |
| 105 | Earth work in excavation in hard rock requiring controlled blasting including wedging, line drilling, pre shearing etc as required, setting out, levelling, dewatering (wherever required), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, necessary licenses/statutory clearances for blasting, supply, storage & handling of blasting materials, stacking/disposal of surplus excavated material within a lead upto 500m, spreading / levelling of disposed materials etc all complete for following depths below ground level. | | | |
| a | Depth from ground level but not exceeding 2 m | CUM | 40.00 | 0.00226027 |
| b | Depth exceeding 2 m but not exceeding 4 m | CUM | 40.00 | 0.00226027 |
| 107 | Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials from compulsorily excavated soil / from Stock Pile of other sources available within a lead upto 500m and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following. | | | |
| a | Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII) | CUM | 28491.00 | 0.29238115 |
| b | Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII) | CUM | 9497.00 | 0.09746038 |

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| 108 | Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials directly from excavation and compacted as specified including watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following. | | | |
| a | Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII) | CUM | 28491.00 | 0.28183848 |
| b | Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII) | CUM | 9497.00 | 0.09394616 |
| 109 | Extra over ST No. 101 and 103 to 107 for carriage of excavated earth/selected materials beyond an initial lead of 500m. | | | |
| a | Carriage beyond initial lead of 500m or part thereof but not exceeding 2 km | CUM | 37923.00 | 0.16880551 |
| b | Carriage beyond 2 km or part thereof but not exceeding 3 km | CUM | 37923.00 | 0.33761103 |
| c | Carriage beyond 3 km or part thereof but not exceeding 4 km | CUM | 12641.00 | 0.16880551 |
| d | Carriage beyond 4 km or part thereof but not exceeding 5 km | CUM | 6320.00 | 0.1125281 |
| e | Carriage beyond 5 km or part thereof but not exceeding 6 km | CUM | 6320.00 | 0.14066013 |
| f | Carriage beyond 6 km or part thereof but not exceeding 7 km | CUM | 6320.00 | 0.16879216 |
| g | Carriage beyond 7 km or part thereof but not exceeding 8 km | CUM | 6320.00 | 0.19692418 |
| h | Carriage beyond 8 km or part thereof but not exceeding 9 km | CUM | 6320.00 | 0.22505621 |
| i | Carriage beyond 9 km or part thereof but not exceeding 10 km | CUM | 6320.00 | 0.25318824 |
| 110 | Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying borrowed soil, royalty (if any), watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following. | | | |
| a | Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII) | CUM | 227925.00 | 7.8629306 |
| b | Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII) | CUM | 75975.00 | 2.63969165 |

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| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 111 | Supplying and filling sand upto any depth under floors, around foundations, plinths etc. in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete. | CUM | 1440.00 | 0.10611845 |
| 200 CONCRETE WORKS | | | | |
| Providing and placing concrete work including cost of labour, materials and equipment for handling, transportation, batching, mixing, placing, vibrating and curing, (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following. | | | | |
| 201 | Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as filling course at any depth below finished floor level, under and around foundations/floors, mass fill etc. | CUM | 10.00 | 0.002174 |
| 202 | Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course , mud mat under and around foundations/floors at any depth below finished floor level etc. | CUM | 1931.00 | 0.52222832 |
| ISG 202 | Concrete of design mix of grade M10 of 20 mm graded aggregate by volume) as lean concrete, levelling course , mud mat under and around foundations/floors at any depth below finished floor level etc. complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following. | CUM | 644.00 | 0.17407121 |
| 203 | Concrete of grade M15 (1 part cement, 2 part sand, 4 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course , mud mat under and around foundations/floors at any depth below finished floor level etc. | CUM | 1931.00 | 0.64207154 |

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| ISG 203 | Concrete of design mix of grade M15 of 20 mm graded aggregate by volume) as lean concrete, levelling course , mud mat under and around foundations/floors at any depth below finished floor level etc.complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following. | CUM | 644.00 | 0.20205533 |
| 205 | Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc at any level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following. | | | |
| ISG a' | M20 Grade | CUM | 3559.00 | 1.22950608 |
| a | M25 Grade | CUM | 14554.00 | 5.66493293 |
| A205 | Providing and laying Design Mix cement concrete (M20) conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in grade slab and paving using Vaccum Dewatered Flooring (VDF) method etc at any level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing. | CUM | 500.00 | 0.20319364 |
| 206 | Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at any level above finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following. | | | |
| a | M25 Grade for all works above up to 20M | CUM | 9132.00 | 3.79500317 |
| b | M25 Grade Extra over and above item no 206 (a) for all works above 20M up to 40M | CUM | 320.00 | 0.14280941 |

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| c | M25 Grade Extra over and above item no 206 (a) for all works above 40M up to 60M | CUM | 100.00 | 0.04769869 |
| d | M25 Grade Extra over and above item no 206 (a) for all works above 60M up to 80M | CUM | 100.00 | 0.05076943 |
| ISG 206 | Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works of grade M-30 Grade in machine foundation for crusher deck at all heights from finished floor level supported over VIS (excluding supply & installation of vibration system) including addition of suitable plasticizer conforming to IS 9103(latest) to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate in concrete all complete as per specification & drawing. | CUM | 400.00 | 0.18388194 |
| 210 | Extra over ST Nos. 205 to 207 for conducting UPV test for concrete at all levels including all equipments, making necessary arrangements, staging, submission of report etc. all complete as directed by engineer in charge and as per specification. | CUM | 50.00 | 0.00655943 |
| ISG 210 | Providing and encasing of structural steel member with concrete using nominal aggregate size of 20mm down. Encased member shall be wrapped with welded wire mesh/chicken wire mesh with proper lap etc. complete as per specification for the following grades. (Payment of welded wire mesh, chicken wire mesh shall be made separately) | | | |
| a | M20 grade | CUM | 200.00 | 0.06184704 |
| 212 | Screed concrete conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at any level or thickness, drains etc complete as per following. | | | |
| a | 1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume) | CUM | 326.00 | 0.13560558 |

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| 213 | Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in precast works like roof slabs/trench covers, fins, lintels, chajas, beams, columns, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transporting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent precast units with M30 grade concrete or cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc.complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades. | | | |
| b | M 30 grade | CUM | 200.00 | 0.08412661 |
| ISG 214 | Providing and laying Design Mix cement concrete as per IS:456, IS 3370 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in water retaining/conveying structures or under grounds structures including addition of suitable plastisizer cum waterproofing cement additives such as "SIKA/ FOSROC' or equivalent make confirming to IS 9103 latest to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per IS 2545 and specification with 20 mm nominal size graded aggregate for following grades. | | | |
| a | M 25 grade | CUM | 150.00 | 0.06057378 |
| b | M 30 grade | CUM | 28212.00 | 13.68081946 |
| b | M 35 grade | CUM | 23833.00 | 13.60268603 |
| 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 | 15.00 | 0.003357 |
| b | Reinforced cement concrete of all grades | CUM | 15.00 | 0.00473876 |

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| 216 | Chipping of concrete in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 2 km as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement . | CUDM | 100.00 | 0.00114992 |
| 217 | Extra over and above St No 216 for cutting of reinforcement , all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut. | SQCM | 20.00 | 0.00026212 |
| 218 | Cutting Reinforced concrete with mechanised tools like Core drilling machine etc. for cutting pockets, holes, cores in slab, beam, column or foundation as per direction of engineer in charge. | CUDM | 20.00 | 0.00023988 |
| 219 | Providing and applying curing compound of approved make where ever required as per manufacturer's specification. | SQM | 7000.00 | 0.03722051 |
| ISG | Providing & laying Plum cement concrete 1:3:6 with 75% graded metal of maximum size 40 mm and 25% plums of maximum size 150 mm. | CUM | 350.00 | 0.14748592 |
| ISG 221 | SHOTCRETING | | | |
| | Shotcreting (Guniting) specified concrete surfaces as per the following specifications including all materials. Labour, tools and plants, scaffolding etc all complete as per the directions of Engineer in charge, : | | | |
| | i. Fabricating and fixing in position 6mm M S bars at 750mm c/c including connecting to the lugs for fastening | | | |
| | ii. Fixing wire fabric conforming to IS:1566 as reinforcement with 3mm diameter spaced at 50mm c/c both ways electrically cross welded including securely tying to the 6mm MS bars by maintaining 100mm overlap for adjacent sheets | | | |

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| | <p>iii. Fine aggregate shall consist of natural sand or crushed stone from a known source and shall be strong, hard, coarse, sharp, chemically inert, clean and free from any coating. It shall be free from clay, coal or coal residue, organic or any other impurities that may impair the strength or durability of the concrete and shall conform to IS: 383. The fineness modulus shall be preferably between 2.5 and 3.3. Any other value can be used, with prior approval of the Engineer. Fine aggregate (Sand) shall be well graded and particles shall range in size within limits. The Engineer may approve the use of any other grading as per requirement or as per IS: 9012.</p> | | | |
| | <p>iv. The surface after the placement of reinforcement and / or welded mesh and not more than six hours prior to the application of concrete, shall be thoroughly cleaned of all loose materials and dirt. The Contractor shall properly prepare the surfaces, reinforcement and / or welded mesh to receive the shotcrete. Cleaned surfaces shall be wetted not more than hour prior to shotcreting.</p> | | | |
| | <p>v. The mix as placed on surface shall be one part cement to three parts approved sand by mass. Cement and sand shall be dry mixed; no water shall be added after mixing and before using in the gun. The quantity of water when added shall be only that which is sufficient to hydrate the cement. For average atmospheric conditions, the water cement ratio for shotcrete in place shall be between 0.35 and 0.5 by mass. Suitable admixture shall be used wherever required.</p> | | | |
| | <p>vi. A uniform pressure of not less than 25 Kgf / cm² at the nozzle shall be maintained. Necessary adjustments shall be made to ensure this pressure, taking into account the length of hose and height of the place to be shotcreted, above location of the machine.</p> | | | |
| | <p>vii. The application shall proceed in an upward direction. Beams, stiffeners and intermediate walls, if any, shall be wrapped with wire fabric and completely covered with shotcreting. All rebound shall be removed from the area of application as the work progresses and such rebound material shall not be reused.</p> | | | |

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| | viii. As soon as the freshly shotcreted surface shows the first dry patches, a fine spray of water shall be applied to keep too moist. After the surface has hardened, it shall be kept continuously moist for minimum seven days. If there is extreme heat, especially when accompanied by hot winds, the shotcreted surface, immediately upon completion, shall be covered with burlap or similar covering, which must be kept continuously moist for 14 days after shotcreting. The temperature of the lining shall not be permitted to exceed 38oC during placing and curing. | | | |
| | Note: 6mm MS Reinforcement and welded wire mesh as specified shall be used for thickness of Shotcreting above 50mm | | | |
| | a. Shotcreting for thickness 50mm and above of with 6mm MS Reinforcement and welded wire mesh as specified | Sqm | 13585.00 | 2.84220214 |
| | b. Shotcreting for thickness 25mm without 6mm MS Reinforcement and welded wire mesh as specified | Sqm | 100.00 | 0.01095997 |
| 300 FORM WORKS | | | | |
| Providing, fixing and removing formwork at any elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering complete including pockets etc. complete as per drawing, specifications and as per direction of engineer in charge for the following. | | | | |
| ISG 301 | Ordinary form work below finished ground floor level for lean concrete, mud mat, plum concrete etc. | SQM | 750.00 | 0.02299837 |
| 301 | Fairface form work with good quality water proof ply wood of required thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc. | SQM | 100128.00 | 3.83796856 |
| 302 | Fairface form work with good quality water proof ply wood of required thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights. | SQM | 33376.00 | 1.62183499 |

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| ISG 302 | Ordinary form work above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches etc for all heights. | SQM | 750.00 | 0.02915571 |
| ISG 303 | Providing, fixing & removing curved type of shuttering including staging, propping (cost incl. of submitting supporting design & drawing and approval etc.) at all locations, heights and levels above or below ground with Slip Formwork complete as per specification and directions of engineer incharge | SQM | 100.00 | 0.00583114 |
| 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 | 38.00 | 0.00173849 |
| b | Pockets of depths more than 150mm and upto 300 mm depth | Each | 38.00 | 0.00180426 |
| c | Pockets of depths more than 300mm and upto 600 mm depth | Each | 38.00 | 0.00287081 |
| d | Pockets of depths more than 600mm and upto 1000 mm depth | Each | 10.00 | 0.00104852 |
| 305 | Fairface plywood with filmface/laminated formwork above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights where ever specifically mentioned in the drawing. | SQM | 50.00 | 0.00302316 |
| 400 REINFORCEMENT | | | | |
| REINFORCEMENTS (TMT/ HYSD BARS STEEL SHALL BE SUPPLIED BY BHEL FREE OF COST AS PER TCC). | | | | |
| Loading, transporting and unloading from BHEL stores at location The Steel will be issued to the agency in standard lengths. Reinforcements of 8mm, 10mm & 12mm dia steel may be supplied in coil form and the item below should include cost of decoiling with no extra cost. | | | | |
| 401 | Receipt from stores, Straightening, cutting, bending, placing in position at any level, binding of mild steel reinforcements conforming to grade 1 of IS:432 part 1 in concrete including cost of reinforcement and binding wire, labour, scaffolding, transportation to & from stores etc. all complete as per specifications & drawings. | MT | 10.00 | 0.00850708 |

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| 402 | Receipt from stores, Straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500/ Fe-415 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 | 9731.00 | 8.27823984 |
| 406 | Receipt from stores, straightening cutting, bending, placing in position at any level, binding of mild steel reinforcements in brickwork including cost of reinforcement and binding wire, labour, scaffolding etc. complete all as per specifications & drawings. | MT | 5.00 | 0.00425354 |
| 407 | Receipt from stores, straightening, cutting, bending, placing in position at any level, binding in position high yield strength steel reinforcements in brickwork including cost of reinforcement and binding wire, labour, scaffolding etc. complete all as per specifications & drawings. | MT | 5.00 | 0.00446359 |
| 500 WATER PROOFING WORKS | | | | |
| Water proofing works including all labour, material, equipment, transportation, handling, curing, sampling, testing etc at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| A501 | Providing and laying underbed grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 15 mm including preparation of surface, batching, mixing, leveling etc. all complete. | SQM | 125.00 | 0.00140024 |
| ISG 502 | Providing and laying rigid insulation (extruded polystyrene blocks) as per relevant IS Code in suitable panels over roofs.The block shall be strong enough to withstand without deformation the workload and standard loads expected on the roof. Cost shall include making of fillets, cleaning & preparation of surface, expansion joints including filling with sealants at suitable intervals etc all complete as per specification for following. | | | |
| a | Average 50 mm thickness | SQM | 4350.00 | 0.43402064 |

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| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| A506 | Providing and applying PU based water proofing treatment with elastomeric, seamless waterproof membrane applied in 2 coats to a DFT of 1.2 mm thick having a elongation capacity of over 600% and average tensile strength of 1 MPa, tear resistance as per GBT 19250-2003 >20N/m. The material shall comply with – ASTM C 836 National Std. of Canada 37.58 – M86 by CGSB. All complete as per specifications and directions of engineer in charge. | SQM | 4350.00 | 0.31196089 |
| B506 | Providing and applying a separation layer of non-woven polypropylene geo-textile membrane of 120 gsm for water proofing as per technical specification. | SQM | 4350.00 | 0.04571694 |
| A508 | Providing and laying pressed precast concrete tiles of 20 mm thickness and size 600x600 mm conforming to IS 13801 with 15 mm thick 1:4 cement mortar over the top most layer of roofing treatment with fine joints including sealing of joints (silicon/elastomeric sealant) etc all complete. (Water proofing paid elsewhere) | SQM | 4350.00 | 0.29421224 |
| 509 | Providing and applying two coats of bitumen grade 85/25 as per IS 702 (@ 1.7kg/sqm)with 1% antistripping compound conforming to IS 6241 in foundation, wall, column etc on concrete surfaces exposed to soil / ash including surface preparation etc. all complete. | SQM | 46893.00 | 0.85813754 |
| 512 | Anti termite chemical treatment of soil with Chloropyrifos emulsifiable concentrates (1%) conforming to IS :8944 all complete. | SQM | 750.00 | 0.00723358 |
| 600 JOINTS AND FILLERS | | | | |
| Joints & fillers including all labour, material, equipment, transportation, handling etc at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| 601 | Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete. | | | |
| a | 12 mm wide joints. | SQM | 65.00 | 0.00793259 |
| b | 20 mm wide joints. | SQM | 75.00 | 0.01212976 |
| c | 25 mm wide joints | SQM | 67.00 | 0.01324666 |
| d | 50 mm wide joints | SQM | 7.00 | 0.00178298 |

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| All civil and Architectural works required for Coal Handling Plant AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana. | | | | |
|---|--|------|----------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 602 | Providing and applying polysulphide based sealant conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves: | | | |
| a | 12mm X 25mm | RM | 225.00 | 0.0039783 |
| b | 20mmX25mm | RM | 175.00 | 0.00484702 |
| c | 25mmX25mm | RM | 50.00 | 0.00244819 |
| d | 50mmX25mm | RM | 13.00 | 0.00127306 |
| 603 | Supplying and filling in position hot applied bitumin sealing compound (Grade A) confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete. | | | |
| a | 10mm X 40mm | RM | 25.00 | 0.00003708 |
| b | 12mm X 25mm | RM | 38.00 | 0.0000423 |
| c | 20mmX25mm | RM | 25.00 | 0.00004636 |
| 606 | Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following: | | | |
| a | 150 mm wide and 8 mm thick | RM | 25.00 | 0.00092733 |
| b | 230 mm wide and 8 mm thick | RM | 25.00 | 0.00127664 |
| c | 150 mm wide and 6 mm thick | RM | 50.00 | 0.00145903 |
| d | 230 mm wide and 6 mm thick | RM | 10473.00 | 0.93365861 |
| 700 MS EMBEDMENTS | | | | |
| Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| 701 | 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 | 10.00 | 0.08539911 |
| 702 | Same as above with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site. | MT | 15.00 | 0.04029339 |

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|--|--|---------|-------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 703 | Fixing of embedments, inserts, pipe sleeves, angle pieces, anchor bolts of various diameters, plates of dimensions as required etc. including scaffolding, setting in position, transportation from BHEL site stores to work spot etc. all complete. | MT | 15.00 | 0.02702486 |
| 704 | Supply, Fabrication, transportation, delivery at site and erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete. | MT | 50.00 | 0.52945546 |
| 705 | Supplying, fabricating, erecting and installing following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete. | | | |
| a | MS pipes of all diameters | Quintal | 10.00 | 0.01074242 |
| b | PVC pipes / conduits of all diameters | Quintal | 12.50 | 0.0272162 |
| c | UPVC pipes / conduits of all diameters | Quintal | 12.50 | 0.03072 |
| d | Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity including SS Clamps wherever required as specified below for brick work with/without expansion sleeve of A6 polyamide: | | | |
| i | Upto 250 kg | Each | 25.00 | 0.00118459 |
| ii | Beyond 250 Kg and upto 500 kg | Each | 25.00 | 0.00165137 |
| iii | Beyond 500 Kg and upto 750 kg | Each | 12.50 | 0.00122753 |
| e | Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel: | | | |
| i | Upto 250 kg | Each | 25.00 | 0.00099844 |
| ii | Beyond 250 Kg and upto 500 kg | Each | 25.00 | 0.00152085 |
| iii | Beyond 500 Kg and upto 750 kg | Each | 12.50 | 0.00119473 |
| 706 | Placing, locking and releasing of Vibration Isolation spring modules over the foundation at all elevations including providing all assistance under the supervision of the supplier, transportation from BHEL store, necessary staging, platforms, leveling, alignment etc. all complete. | Each | 20.00 | 0.00298729 |

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|---|--|------|----------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| ISG 707 | Receipt from BHEL Stores or Yard, transporting, fixing in position and alignment of Rail Fixing Bolts for Stacker cum reclaimer Foundation beams with required base plate, sims and grouting after alignment, including all cost of material, labour and equipment, handling at site all complete as per approved drawings, specifications and instructions of Engineer In-charge. (Quoted price shall include the cost of all works, labour & T&P required. Base plate, sims bolts, nuts etc. shall be provided by BHEL free of Cost. Grouting, if applicable, shall be paid separately under relevant item of Schedule of Rates). | Nos. | 10000.00 | 0.12696211 |
| ISG 708 | Receipt from BHEL Stores or Yard, transporting, fixing in position of Flat Bottom Rails over existing bolts on Stacker cum reclaimer Foundation beams with required base plate, sims and grouting after alignment, including all cost of material, labour and equipment, handling at site, required grinding, jointing rails with available bolts, all complete as per approved drawings, specifications and instructions of Engineer In-charge. Measurement shall be on the basis of weight of Rail fixed only excluding the fixtures, base plate, sims bolts, nuts etc. (Quoted price shall include the cost of all works, labour & T&P required. Rails base plate, sims bolts, nuts etc. shall be provided by BHEL free of Cost. Grouting shall be paid separately under relevant item of Schedule of Rates). | MT | 75.00 | 0.11434729 |
| 800 GROUTING | | | | |
| Grouting including all labour, material, equipment, roughening surface, cleaning, ramming, curing etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge. | | | | |
| ISG 801 | Waterproofing for underground concrete structure shall be done by injecting high polymer based non- shrink waterproof grouting compound through nozzle under pressure as per manufacturer's recommendation. The pressure during injection shall not be less than 2.5 kg/Sq.m. Payment shall be made as per the consumption of grout. | KG | 400.00 | 0.01001372 |

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|---|---|------|-------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 802 | Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc. with mix 1:1 (1 cement :1 sand) using non shrink admixture etc. all Complete. | CUM | 10.00 | 0.02323255 |
| 803 | Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with mix 1:1:2 (1 cement : 1 coarse sand : 2 aggregate of 6 mm down graded stonechips) using non shrink admixture. (Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor). | CUM | 10.00 | 0.01380563 |
| 804 | Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with ConbextraGP-1 or equivalent. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor). | CUM | 60.00 | 0.39372345 |
| 805 | Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with Conbextra GP-2 or equivalent. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor). | CUM | 5.00 | 0.03643437 |
| 900 DOORS, WINDOWS, VENTILATORS, LOUVERS | | | | |
| Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material, equipments, transportation, handling, preparation of working drawings etc. at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| A901 | Providing and fixing wooden frame conforming to IS 4021 made of best quality seasoned hardwood free from large or loose knots, cracks or other defects including sand paper smoothening, hold fasts, beading, primer and finish painting / polishing etc. all complete with proper wood joinery, accurately set to required lines or levels and rigidly secured in place. (Finish painting / polishing paid separately) | CUM | 1.00 | 0.00420102 |

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All civil and Architectural works required for Coal Handling Plant AT **4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana.**

| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
|--------|--|------|---------|-------------------------------------|
| 904 | Providing and fixing single or double steel door shutters with 45mm thk flush design shutter comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres including void filled with mineral wool (density as per specification), all fittings, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete. | SQM | 50.00 | 0.03572849 |
| A907 | Providing and fixing fire proof steel doors (single or double shutter) with panic devices and vision panel shall be 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers including all fittings, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, TAC requirements and as per specification. Minimum ratings shall be 2 Hrs. | SQM | 25.00 | 0.04519637 |
| 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 | 1947.00 | 0.66781378 |
| b | fixed type | SQM | 959.00 | 0.31517806 |
| A908 | Providing and fixing windows/ventilator with M.S. grills as per approved design for security purpose made of 25 mm X 6mm M.S. Flats / 12mm – 20mm M.S. square bar of approved design shall be provided to suit security requirements. | Kg | 400.00 | 0.00415828 |

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| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
|--------|--|------|--------|-------------------------------------|
| A909 | Providing and fixing anodised aluminium work of Jindal, Hindalco or other equivalent approved make for door/window frames, door/window shutters, ventilators, partitions, railing, grills etc with extruded standard tubular and other sections including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro color dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion fasteners, SS screws or with fixing clips, including necessary filling of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-mettalic protection etc.including preperation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/panelling, stair case tread nosing, with all fittings and fixtures (like tower bolts, handles, door stopper with rubber shoes, 'L' drops, stays, floor springs, hydraulic door closures etc.), CP brass/stainless steel screws, providing and fixing hinges/pivots, and making provision for fixing of fitting wherever required including cost of PVC/neoprene gasket, all complete as per drawing, specification and instructions of engineer in charge (Glazing and panelling shall be paid seperately).Weight of aluminium section only shall be measure. | Kg | 250.00 | 0.01397207 |
| A910 | Providing and fixing of aluminium composite panel(ACP) 3mm thick fixed in aluminium frame including sealant with minimum 0.2mm topping of precotaed aluminium foil on both side of approved manufacturer & approved shade, all complete as per specification. | SQM | 425.00 | 0.16490162 |
| 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 | 15.00 | 0.00283398 |
| b | Floor mounted Hydraulic door closers | Each | 15.00 | 0.00482407 |
| 912 | Providing and fixing pressed steel frames fabricated from 16 gauge M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustable floor anchors, floor tiles/weather bars ,paintings etc all complete as per specifications. | Kg | 375.00 | 0.00510045 |

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| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
|--------|--|------|---------|-------------------------------------|
| 913 | Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles.(partly coiled and lath/full lath). | | | |
| a | Hand Operated | SQM | 12.00 | 0.00461468 |
| b | Mechanically Operated | SQM | 60.00 | 0.0284817 |
| c | Electrically operated | SQM | 12.00 | 0.00968618 |
| 914 | Providing and fixing PVC doors (25 thk double skin) with PVC frame of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge. | SQM | 15.00 | 0.00491681 |
| A914 | Providing and fixing Solid core PVC doors (25 thk double skin) with PVC frame of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge. | SQM | 15.00 | 0.00590017 |
| 915 | Providing, fixing and fitting of glazing of first grade class in steel/aluminium/wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete. | | | |
| b | 4 mm thick clear float glass | SQM | 50.00 | 0.00326428 |
| d | 6 mm thick wired glass | SQM | 1862.50 | 0.17064626 |
| e | 6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges. | SQM | 10.00 | 0.00258792 |
| f | 4 mm thick ground glass | SQM | 10.00 | 0.00069489 |
| g | 6 mm thick tinted heat reflecting type float glass | SQM | 10.00 | 0.00159999 |
| h | 6 mm thick clear toughened safety glass | SQM | 10.00 | 0.00211436 |
| i | Two nos. 6 mm thick clear toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured) | SQM | 25.00 | 0.0089304 |

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|--|---|------|--------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| A915m | 6 mm thick clear float glass with itching | SQM | 25.00 | 0.00176024 |
| A915n | One outer 6mm thick tinted heat-reflecting type float glass and one inner 6mm thick toughened float glass hermetically sealed and seperated by 12 mm thick gap for thermal insulation (only single elevation area to be measured). | SQM | 10.00 | 0.00126031 |
| ISG 915 | 6 mm thick clear float glass | SQM | 10.00 | 0.00091498 |
| 916 | Supplying and fixing weather stripping of approved make and quality to doors as per instructions of engineer in charge and specification complete. | RM | 30.00 | 0.00084573 |
| 917 | Providing and fixing 12 mm thick BWP particle board , decorative veneer (prelaminated) on both sides, as panels in aluminium framed door shutter, fixed with necessary snap-on-beading etc. all complete (excluding aluminium works). | SQM | 20.00 | 0.0044043 |
| ISG 918 | Providing and fixing steel windows/ventilator with steel sections with necessary framework as per approved drawings, The window shutters shall be provided with M.S Louvers and 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. - louver blade shall be Z shaped and made out of 18G sheets in E27 steel frames all complete as per the directions of the Engineer in charge. Quoted rate shall be all inclusive. (Glazing shall be paid separately) | | | |
| | a. Openable type | Sqm | 250.00 | 0.09279682 |
| | b. Fixed type | Sqm | 250.00 | 0.08815701 |
| A921 | Supplying, installing and commissioning of self sliding mechanism for aluminum door (double shutter) including photo operated sensors, fittings, motors, mechanical systems, electrical systems, warranty all inclusive in working condition as per specifications (aluminum and glazing to be paid seperately) | NOS | 2.00 | 0.01890462 |
| 1000 BRICKWORK | | | | |
| Brickwork masonry including all labour, material, equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge. | | | | |
| A1001 | Providing brick work in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc. in thickness varying from 230mm to 460mm at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting. | | | |

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|--|---|------|---------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| a | Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm ² | CUM | 100.00 | 0.04550702 |
| A1002 | Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting. | | | |
| a | Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm ² | CUM | 1364.00 | 0.57756673 |
| A1003 | Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls , chambers etc. in thickness 115mm at all heights, places and position above or below plinth/graded level including providing two nos. 6 mm diameter MS bars at every third layer, raking out joints, curing, scaffolding etc complete excluding plastering and painting as per specification. | | | |
| a | Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm ² | SQM | 3260.00 | 0.19148196 |
| A1004 | Providing brick soling including spreading of earth, ramming, watering including 25mm thick cushion of sand complete but excluding excavation and disposal of surplus earth (excavation and disposal of surplus earth shall be measured under applicable item). Using brick on edge. | | | |
| a | Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm ² | CUM | 12.50 | 0.00590769 |
| 1006 | Breaking of existing brick work at all levels including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer. | CUM | 15.00 | 0.00159133 |
| 1007 | Providing and encasing of structural steel member with masonry work around flanges, webs etc. and filling the gap between steel and masonry by minimum 12mm thick mortar. Encased member shall be wrapped with chicken wire mesh with 50mm lap etc. complete as per specification. (Chicken wire mesh to be paid seperately) | CUM | 12.50 | 0.00491804 |
| 1009 | Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar etc. complete. | CUM | 5.00 | 0.00071097 |

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|--|---|------|----------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 1010 | Supply and placing in position mild steel wire fabric of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in concrete including cutting, bending, fixing etc. complete. | SQM | 250.00 | 0.00775879 |
| 1011 | Filling existing brick wall/ partition wall opening at all level including making good the broken edges/surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/supporting at any level, removal of debris upto a lead of 1 km including loading, unloading, transportation etc. all complete. | SQM | 50.00 | 0.00411123 |
| 1012 | Providing and filling brick bats in soak pits all complete. | CUM | 15.00 | 0.00198824 |
| 1100 DAMP PROOF COURSE | | | | |
| Damp proof course including all labour, material, equipment, transportation, handling, shuttering, centering, curing etc at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| 1101 | Providing Damp Proof Course 40mm thick 1:1.5:3 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound all complete. Two layers of hot bitumen coating 85/25 grade as per IS:702 @ 1.7Kg./sqm shall be applied one before & one after the DPC. | SQM | 316.00 | 0.01153982 |
| 1200 CEMENT MORTAR PLASTER | | | | |
| Cement mortar plaster including making grooves wherever required including all labour, material, scaffolding, curing etc at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| A1201 | Providing 20mm thick plaster in two layers outside the building/rough surface of internal wall in cement mortar 1:4 on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete.The two layer include 1:4 cement sand mortar 12mm thick first layer and 1:3 cement sand mortar with 8mm. | SQM | 5051.00 | 0.24760203 |
| A1202 | Providing 12mm thick plaster inside the building/boundary wall in cement mortar 1:4 on walls finished to a smooth finish as per specification all complete. | SQM | 19461.00 | 0.84928277 |
| A1204 | Providing 6mm thick plaster on ceiling in cement mortar 1:3 finished to a smooth all complete. | SQM | 7070.00 | 0.11617685 |
| 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 | 125.00 | 0.00146386 |

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|---|---|------|---------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 1206 | Providing and making decorative plaster of all types and design on walls, ceilings, arcs, columns with various thickness upto 18 mm including finishing all complete. | SQM | 10.00 | 0.00021261 |
| 1207 | Forming groove of uniform size from 12X12 mm upto 20X15 mm in plastered surface as per approved pattern, using wooden battens nailed to the under layer, including removal of wooden battons, repair of the edges of plaster panel and finishing the groove etc. complete as per specification, drawing and the instructions of engineer in charge. | RM | 125.00 | 0.00049455 |
| 1208 | Providing drip coarse 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 | 125.00 | 0.00037098 |
| 1209 | Providing and laying encasement to box type steel beams at all levels with lath plaster 50 mm nominal thickness with cement plaster (1:4) over chicken wire mesh including all labour, materials, equipment, handling, transporting, mixing, placing, leveling, curing and cleaning, finishing the exposed surfaces etc including centering and shuttering all complete as per specification, drawing and instructions of enginner in charge (chicken wire mesh to be paid separately) | SQM | 125.00 | 0.00404746 |
| 1210 | Ruled pointing in masonry in CM 1:3 (1 cement and 3 fine sand) including raking out joints, curing etc. complete. | SQM | 10.00 | 0.00008013 |
| 1300 FINISHES TO CONCRETE / PLASTERED SURFACES | | | | |
| Finishes, painting to concrete, plastered surfaces including all labour, material, equipment, surface preparation, scaffolding etc. at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| 1303 | Providing and applying two or more coats of oil bound distemper as per IS 428 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline. | SQM | 25.00 | 0.00023184 |
| 1304 | Two or more coats of acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete as per spec. | SQM | 7070.00 | 0.06556477 |

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| All civil and Architectural works required for Coal Handling Plant AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana. | | | | |
|--|--|------|----------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 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 | 13086.00 | 0.19254084 |
| ISG 1305 | Providing and applying two or more coats of waterproof external quality acrylic emulsion paint as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline. | SQM | 5051.00 | 0.07803377 |
| 1309 | Two or more coats of synthetic enamel paint of approved make made from synthetic resins and drying oil with rutile titanium dioxide and other selected pigments to give smooth, hard, durable & glossy finish to all interior and exterior surfaces complete. | SQM | 2617.00 | 0.02912243 |
| 1311 | Providing and applying resin bonded granular textured finish, for external applications shall consist of crushed stone/quartz chips of .5 mm to 2.5 mm size and of approved natural color/shade and bonded with synthetic resins, adhesives and additives altogether in a single pack mix, applied on cured and dried plaster surface with a dry film thickness of minimum 2 mm. The final finish shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with poly sulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge. | SQM | 200.00 | 0.01097972 |
| 1312 | Providing and applying 2 mm thick plaster of paris punning on walls including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer. | SQM | 10.00 | 0.00008407 |
| A1312 | Providing and applying 3 mm thick white cement putty punning on walls (Birla White/ JK White or Similar approved) including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer. | SQM | 8597.00 | 0.16215672 |
| 1313 | Providing and applying ready made Epoxy Paint over areas other than steel structure with suitable pigments of approved shade as per specification and direction of Engineer. The epoxy paint shall be a two pack material and shall be resistant to water, splash, spillage & acidic environment. The epoxy paint coating shall be of 150micron thickness over epoxy primer. | SQM | 1000.00 | 0.04278189 |

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| All civil and Architectural works required for Coal Handling Plant AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana. | | | | |
|---|--|------|----------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| A1313 | Providing and applying ready made Acid/Alkali resistant Epoxy Paint over areas other than steel structure with suitable pigments of approved shade as per specification and direction of Engineer. The epoxy paint shall be a two pack material and shall be resistant to water, splash, spillage & acidic environment. The epoxy paint coating shall be of 250 micron thickness over epoxy primer. | SQM | 250.00 | 0.00996679 |
| 1400 FLOORING AND SKIRTING | | | | |
| Flooring and skirting at any level including base layer, labour, material, equipments, transportation, handling, curing, polishing etc. at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| 1401 | Providing and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron paricles in flooring. Under layer of 38mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5mm well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix with approved quality metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips): | SQM | 25159.00 | 0.83473405 |
| A1401 | Providing and laying 50 mm thick heavy duty patent stone cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron paricles in flooring. Under layer of 28mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5mm well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix with approved quality metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips): as per spec. | SQM | 2500.00 | 0.14556694 |
| 1406 | Providing and laying polished Kota stone 18mm to 20mm thk in flooring . Under bed shall average 30mm thk of 1 cement : 2 sand : 4 stone aggregates by volume and brought to proper level. The kota stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete. | SQM | 250.00 | 0.03107235 |

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| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
|-------------|---|------|--------|-------------------------------------|
| 1408 | Providing polished Kota stone 18mm to 20mm thk in skirting projecting 6mm from adjacent plaster including cutting brickwall upto the required depth, edging, finishing etc. all complete. | SQM | 75.00 | 0.00906265 |
| 1416 | Providing and laying vitrified ceramic tiles of polished variety of size 600x600 from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 with neat cement slurry etc. all complete for following | | | |
| a | 7mm thick tiles In flooring | SQM | 300.00 | 0.04508164 |
| 1418 | Providing and laying 10 mm thk non-skid fully vitrified tiles of make 'MARBONITE' or 'FERRASTONE of BOSS Profile limited' or equivalent in flooring and skirting over 30 mm thick underbed of 1 part cement and 3 parts coarse sand by weight mixed with sufficient water, complete as per specification laid in pattern of following sizes | | | |
| b | 600X600 mm | SQM | 300.00 | 0.04919912 |
| ISG 1418 | Providing and laying 10 mm thk non-skid fully vitrified tiles of make 'MARBONITE' or 'FERRASTONE of BOSS Profile limited' or equivalent in flooring and skirting over 40 mm thick underbed of 1 part cement and 3 parts coarse sand by weight mixed with sufficient water, complete as per specification laid in pattern of following sizes | | | |
| a | 400X400 mm | SQM | 58.50 | 0.01058248 |
| b | 600X600 mm | SQM | 175.50 | 0.03023571 |

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| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
|--------|---|------|---------|-------------------------------------|
| A1423 | Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles conforming to IS:4457 in flooring/Dado beded and jointed with epoxy mortar all complete for following thicknesses. The tiles should be abrasion resistant & durable. | | | |
| a | 20mm thick | SQM | 375.00 | 0.17723097 |
| A1425 | Providing and laying polished Marble slabs (Aranga white and Abu green marble or Baroda green & Jaisalmer yellow combination or equivalent approved shade/color /design) 20 mm thk in staircase landing/skirting and corridors over minimum 20 mm thick underbed of 1 cement : 2 sand : 4 stone aggregates by volume mixed with sufficient water to form a stiff workable mass. The marble slabs shall be laid over under-bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including moulded marbel nosing, pigments, curing, grinding, making corners, granite polishing etc. complete as per spec. | SQM | 50.00 | 0.0189046 |
| 1426 | Providing and laying marble skirting /dado (Aranga white or approved shade/color /design) equivalent of minimum 20mm thickness projecting 6mm from adjacent plaster all complete including underbed cement mortar 1:3, scaffolding etc. all complete. | SQM | 3.50 | 0.00144066 |
| 1427 | Providing and fixing glazed ceramic tiles of approved color and design of size 200x300mm / 300x300mm in dado of approved size , projecting 6mm uniformly from adjacent plaster or wall finish. The mix for underbed plaster shall consist of 1part cement and 3 parts sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry including pigments, curing etc all complete for following thicknesses: | | | |
| a | 5mm thick | SQM | 125.00 | 0.01074701 |
| A1428 | Providing and laying flexible electric insulated PVC synthetic sheet as per IS 15652-2006 of Suntex Insulatic Pvt. Ltd. Or similar all complete as per specification. | SQM | 1050.00 | 0.09924889 |

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|--|---|------|-------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 1429 | <p>Fixing of removable type flooring system consisting of steel cementitious core panel with CRCA (electrical resistant) coating of 40-60 micron of size 600X600X35 mm with 2 mm thick anti static PVC high pressure laminate and edge trim for protection including proprietary floor supporting system consisting of following min requirements:</p> <p>a. Base plate size 150x150x4 mm hot dip Galvanized (60-80 micron)</p> <p>b. Pedestal stud 32 mm dia at bottom and 2 mm thick crca (electrically resistant) and 19 mm dia - 90 mm long threaded portion MS Rod stud. fixed at bottom with 6mm dia and 40mm length dash fasteners as per grid</p> <p>c. Top head attachment of aluminium die cast alloy with check nuts at bottom portion for attaching the top head thread in the stud allowing for adjustment up to 25 mm up&down.</p> <p>d. Stringer made of hot dip Galvanized (60-80 micron) mild steel channel 30x20x1.2 mm thick</p> <p>e. Heavy duty removable type flooring shall be designed for distributed load of 1250 kg/sqm (minimum).</p> | SQM | 50.00 | 0.03764426 |
| 1430 | Providing and fixing dividing strips in joints of cast in situ floorings at various elevations, finishing, all labour, material etc. complete as per drawing, specification and instructions of engineer in charge. | | | |
| a | Glass strips 40 mm wide and minimum 6 mm thick. | RM | 25.00 | 0.00011128 |
| b | Aluminium strips 40 mm wide and minimum 3 mm thick | RM | 25.00 | 0.00027201 |
| c | Brass strips 20 mm wide and minimum 4 mm thick. | RM | 25.00 | 0.00037402 |
| 1500 ROOFING / SIDE CLADDING | | | | |
| | Roofing / side cladding work including all labour, material, equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at any level as per specification, drawings and as directed by engineer - in - charge. | | | |

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All civil and Architectural works required for Coal Handling Plant AT **4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana.**

| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
|--|---|---------|---------|-------------------------------------|
| A1501 | Designing, providing and fixing permanently color coated galvanised MS troughed metal sheet decking plate of approved colour and conforming to class3 of IS 14246 over roof purlins for cast-in-situ roof slab as per relevant IS code and specification. Bare metal thickness of deck plate shall be minimum 0.8mm with minimum trough depth of 44 mm having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the roof slab 100mm thick measured over crest of metal decking & shall have adequate strength to support weight of green concrete and imposed loads of min 150 kg/sqm during construction between purlins as per manufacturer's recommendations/ calculations/ test certificates for approval including fixing of plates to purlins, side lapping, end lapping etc. all complete for below mentioned spans. The sheet shall be permanently coated with silicon modified polyster paint of minimum 20 micron DFT on exposed surface (facing operating floor) and minimum 7 micron on other face over epoxy primer applied over hot dipped galvanising @ 275 gm/sqm including fixing of sheet to purlin with self drilling white zinc plated heat treated carbon steel screws of minimum 5.6 mm dia @ 260mm c/c in the trough and stich screws between two adjacent sheets and sealing with epoxy sealant. Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking. | | | |
| a | Span Upto 1800mm | SQM | 4923.00 | 0.77732922 |
| 1502 | Providing and fixing shear connectors of mild steel studs having 16mm dia and minimum 75 mm projected length above purlin passing through metal decking as per relevant IS codes and specification. | QUINTAL | 145.00 | 0.12713306 |
| 1600 FALSE CEILING | | | | |
| False ceiling including all labour, material, equipment, transportation, handling, suspension system etc at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |

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All civil and Architectural works required for Coal Handling Plant AT **4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana.**

| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
|--|--|------|--------|-------------------------------------|
| A1601 | Providing and fixing Moisture and fire resistant glass fibre reinforced gypsum plaster board (GRG) ceiling (having gypsum core mixed with glass fibre) system consisting of metal supporting grid system forming panels of specified size, suspended from RCC slab/structural steel or catwalkway grid above with 4 mm (minimum) galvanised wires (rods) with special height adjustment clips, including preparation of working drawing, providing openings for AC ducts, return air grills, light fixtures etc (but excluding the cost of catwalkway grid) all complete as per drawings, specification and instructions of the engineer. | | | |
| a | 12.5 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat (seamless). | SQM | 50.00 | 0.00699843 |
| b | 12.5 mm thick GRG board in profile (dome ,curved profiled etc.) with galvanised light gauge steel load bearing supporting GI frame and finished smooth (seamless). | SQM | 50.00 | 0.0071777 |
| 1603 | Providing and fixing permanently colour coated aluminium false ceiling of approved colour and Luxalon 84 C or approved equivalent with corrosion resistant aluminium alloy panels of minimum thickness 0.5mm including 50mm thick mineral wool insulation(density 48 kg/cum) conforming to IS:8183 bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures, A.C. ducts etc all complete. Suitable M.S. channel grid with minimum MC 75 shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. (Materials for structural platform grid made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301) | SQM | 500.00 | 0.14534666 |
| A1606 | Providing and Fixing CALCIUM Silicate Board/Tiles in false ceiling of HILUX or AEROLITE or equivalent consisting of metal supporting grid system forming panels of specified size, suspended from RCC slab/structural steel or catwalkway grid above with 4 mm (minimum) galvanised wires (rods) with special height adjustment clips, including preparation of working drawing, providing openings for AC ducts, return air grills, light fixtures etc (but excluding the cost of catwalkway grid) all complete as per drawings, specification and instructions of the engineer. | SQM | 15.00 | 0.00337904 |
| 1700 RAIN WATER DOWN TAKE PIPES | | | | |

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|--|---|------|---------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| Rain water down take pipes including all labour, material, transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| 1704 | Providing and fixing galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I) all complete. | RM | 2016.00 | 0.46613894 |
| 1705 | Providing and fixing UPVC down take pipes of 110mm diameter- Class 3 as per IS:4985 all complete. | RM | 15.00 | 0.00109612 |
| 1706 | Providing and fixing UPVC down take pipes of 160mm diameter- Class 3 as per IS:4985 all complete. | RM | 15.00 | 0.00154496 |
| 1707 | Providing and fixing GI down take pipes conforming to IS:1239 /IS:3589 of medium duty all complete for following diameters. | | | |
| a | 100 mm Dia | RM | 100.00 | 0.0129829 |
| b | 150 mm Dia | RM | 2016.00 | 0.37764611 |
| c | 200 mm Dia | RM | 20.00 | 0.00568032 |
| 1708 | Providing and fixing HDPE down take pipes conforming to IS:4984 as per specification of following diameters. | | | |
| a | 110 mm Dia | RM | 30.00 | 0.00129087 |
| b | 160 mm Dia | RM | 30.00 | 0.00182132 |
| c | 200 mm Dia | RM | 30.00 | 0.00242966 |
| 1800 MISCELLANEOUS WORKS | | | | |
| Miscellaneous works including all labour, material, equipment etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge. | | | | |
| 1801 | Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 230 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill. | CUM | 9954.00 | 1.63324778 |

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|--|---|------|-------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 1803 | Anti termite chemical treatment of soil with Chlorpyriphos/Lindane E.C. 20% with 1% concentration conforming to IS:8944 and as per IS 6313 all complete. (Plinth area of building at ground floor only shall be measured for payment) | SQM | 50.00 | 0.00045749 |
| 1804 | Supply and installation of approved 25mm thick vibration damping resilient pads on/around foundation of vibrating equipment and at other locations all complete. | SQM | 20.00 | 0.04049184 |
| 1805 | Providing 50mm thick premix carpet surfacing laid to slope in two layers 30mm and 20mm respectively with 12mm downgraded stone chips mixed with 80/100 grade bitumen @ 52 Kg/Cu.M including compaction etc. all complete. | SQM | 12.50 | 0.00056259 |
| 1806 | Providing 50mm thick anti corrosive layer laid to required slope consisting of clean & well graded coarse sand mixed with A90 grade bitumen for softening point upto 45 degree Celcius or A65 grade bitumen for softening point above 45 degree celcius as per IS: 73 or its equivalent quality 8 to 10% by volume and rolled or compacted all complete. | SQM | 12.50 | 0.00076661 |
| 1807 | Providing and fixing G.I strips minimum 1.5mm thk and 150mm wide including fixing accessories etc. all complete. | Kg | 25.00 | 0.00078515 |
| 1808 | Providing and fixing aluminium strips minimum 18 SWG thk and 300mm wide over expansion joints with minimum lap of 50mm length including brass / aluminium screws, rawl plugs etc. all complete. | Kg | 25.00 | 0.00143429 |
| 1810 | Laying and fixing rails and guide rails in concrete for transformer, rail track including cutting of rails, joining of rails, anchoring lugs etc all complete. Rails and Guide Rails shall be supplied by BHEL free of cost. | MT | 10.00 | 0.05286845 |
| 1812 | Laying of earthing mats/rods including risers, transportation from yard stores, loading, unloading, cutting to length, welding, protective painting of joints etc. all complete. (Excavation & Back filling shall be paid separately under respective item of earth work. Earthing mats/rods shall be supplied by BHEL free of cost. | MT | 5.00 | 0.00754678 |
| 1813 | Providing Earthing pit as per drawing with charcoal & salt, GI pipes, GI earth electrodes, GI wire, GI strips, brick chamber with covers including associated earthwork etc. all complete. | EACH | 0.50 | 0.00062837 |

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|--|---|------|--------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 1814 | Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, concreting, reinforcement, formwork, providing & fixing GI strips/pipes, GI wires, covers etc as per drawing & specification including associated earthwork. | EACH | 0.50 | 0.00029236 |
| 1815 | Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc. all complete. | Kg | 250.00 | 0.00315289 |
| 1817 | Providing and fixing HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc. all complete. | | | |
| a | Upto 75 mm dia | RM | 10.00 | 0.00035733 |
| b | 100 mm dia | RM | 10.00 | 0.00040803 |
| c | 150 mm dia | RM | 175.00 | 0.01168458 |
| d | 200 mm dia | RM | 10.00 | 0.00107696 |
| 1822 | Cutting of groove of 10mm X 40mm size with groove cutting machine in concrete paving all complete. | RM | 10.00 | 0.0000408 |
| 1823 | Fire proofing of steel structures with VERMICULITE cementitious coating including supply of all materials for vermiculite materials, reinforcement mesh (3mm thick wire, 50x50 size mesh) , nuts, tie wires, weldings, surface preparation, curing, staging, compatible paintings etc. all complete. | CUM | 2.50 | 0.02363077 |
| 1825 | Supply and laying approved quality Stone aggregate 40mm size in transformer yards. | CUM | 25.00 | 0.00392269 |
| 1826 | Supply and laying approved quality rounded pebbles / gravels of 40mm size in transformer yards. | CUM | 25.00 | 0.00553318 |
| 1828 | Dismantling old existing reinforced/non-reinforced brickwork/blockwork/stone masonry work in mud/lime/ cement mortar at any level including clearing/cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto 1km all complete. | CUM | 5.00 | 0.00049149 |
| 1830 | Dismantling old existing structural steel work at any level including plates, bolts, cutting rivets, welding, dismembering and stacking the dismantled materials within a lead upto 1km etc all complete. | MT | 5.00 | 0.00605498 |
| 1832 | Providing & filling Bentonite Powder (Sodium base) mixed with water in electronic earthing pit as per drawing & direction below ground level including all materials, transportation, labour, incidental etc all complete as per specification. | CUM | 2.50 | 0.00298699 |

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|--|---|------|----------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 1833 | Supply & fixing FRP (fibre reinforced plastic) sheets 2 mm thick including GI hooks/ J or L bolts, nuts, washers, bitumen washers etc. complete including overlap 100mm . | SQM | 2.50 | 0.00026862 |
| A1834 | Providing and fixing sliding layer of bitumen paper or craft paper over the screed layer for water retaining structures to destroy the bond between the screed and the base slab concrete of the water retaining structure etc all complete. | Sqm | 10.00 | 0.00010502 |
| ISG 1836 | Providing & fixing weep holes consisting of 100 mm dia HDPE pipe sleeves (average length 1500 mm) along with single side covering for the pipe mouth with galvanised welded wire fabric of 20 sqmm opening along with 300x300 sqmm, 300 mm deep, 40 mm aggregates to cover fabric mesh mouth complete as directed by engineer. | NO | 100.00 | 0.0076506 |
| ISG 1837 | Providing and laying coal stock yard area as per the following specification: The ground surface in the coal stock yard area shall be leveled, graded and compacted and provided with proper slopes for drainage. The prepared sub-grade shall be laid over with layer of 150mm thick moorum duly compacted. The compacted earth shall be treated with a mixture of fly ash and lime of 50mm thickness in order to enhance imperviousness. The coal stock yard area shall be as follows: i. 150mm thick moorum. ii. 50mm thick Fly ash & lime Rate shall be inclusive of all cost towards supply of moorum, fly ash & lime, etc., all materials, labour, compaction to required density to make an impervious layer, tools & tackles etc complete as per the direction of engineer-in-charge. | SQM | 81000.00 | 0.96686534 |
| ISG 1838 | Preparation of sub grade by excavating earth to required maximum depth of 250MM in all types of soil/ rock, dressing to proper slope for drainage and compacting (to modified proctor density of 95%) the top layer including making good the undulation etc and disposal of surplus earth within a lead upto 1 km etc. all complete. | SQM | 81000.00 | 0.38195575 |
| ISG 1839 | Conducting plate load test at specified depth using 600mm x600mm x 25mm mild steel plate as per IS -188 and submission of approved test report etc as per the specification . (earth work in excavation and back filling shall be paid extra as per relevant applicable item) | Each | 4.00 | 0.0052087 |
| 2000 FENCING AND GATES | | | | |

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| All civil and Architectural works required for Coal Handling Plant AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana. | | | | |
|---|---|------|--------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| Fencing and gates including all labour, material, equipment etc at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| A2003 | Supplying and erecting in position 2.4 m high PVC coated gavanised chain linked fencing of minimum 4 mm (including PVC coating) of mesh size 75mm x 75mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 2.5 mm. Concertina of height of 600 mm at top of chain link fencing shall be provided with all accessories. Concertina shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1m interval. These two HTSSW strands will be attached to the fence posts/ angles with 12 mm security fasteners. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25X6 mm GI flat stretcher bar at end posts etc. all complete. (Structural post shall be separately) | RM | 375.00 | 0.08211681 |
| 2007 | Supply and fixing of hot dip galvanised mild steel posts for fencing. Rate of zinc coating shall not be less than 710 g/m2 on steel posts. | MT | 1.00 | 0.01181519 |
| 2009 | Supply, fabrication and installing in position and testing galvanised MS Gates out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete. | MT | 1.00 | 0.01195058 |
| 2100 WATER SUPPLY | | | | |
| Water supply work including men, material, equipment etc. at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| 2101 | Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck bib cocks including sockets, union, nuts etc all complete - 15mm nominal bore. | EACH | 20.00 | 0.00187448 |
| 2102 | Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore. | EACH | 20.00 | 0.00161482 |
| 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: | | | |

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| All civil and Architectural works required for Coal Handling Plant AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana. | | | | |
|--|--|------|-------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| a | 25mm nominal bore. | EACH | 10.00 | 0.00144789 |
| b | 50mm nominal bore. | EACH | 10.00 | 0.00359935 |
| A2104 | Providing and fixing Galvanised MS pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete for internal works with MS sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc all complete for following sizes: | | | |
| a | 15 mm nominal bore. | RM | 20.00 | 0.00064297 |
| b | 20 mm nominal bore. | RM | 25.00 | 0.00094589 |
| c | 25 mm nominal bore. | RM | 10.00 | 0.00047356 |
| 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 | 25.00 | 0.0009119 |
| b | 20 mm nominal bore. | RM | 25.00 | 0.0010139 |
| c | 25 mm nominal bore. | RM | 30.00 | 0.00152084 |
| d | 50 mm nominal bore. | RM | 10.00 | 0.00080493 |
| A2106 | Providing and fixing 450X 750 mm high square edge 6 mm thick float glass mirror of adequate width to match toilet lay-out and interior decor and as per spec. | EACH | 5.00 | 0.00058052 |
| 2107 | Providing and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc all complete. | EACH | 4.00 | 0.00038132 |
| 2108 | Providing and fixing 25 mm diameter stainless steel towel rails (600mm X 25mm) all complete. | EACH | 4.00 | 0.00045798 |
| 2109 | Providing and fixing 20mm dia chromium plated M.S. pipes wall mounted towel rod with C.P. Brackets etc all complete. | EACH | 4.00 | 0.00030664 |
| 2110 | Providing and fixing C.P. soap holder mounted with C.P. screws etc all complete. | EACH | 5.00 | 0.00024976 |
| 2111 | Providing and fixing stainless steel / C.P. liquid soap dispenser . Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc all complete. | EACH | 5.00 | 0.00038145 |
| 2112 | Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. sll complete. | EACH | 5.00 | 0.00034868 |

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| All civil and Architectural works required for Coal Handling Plant AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana. | | | | |
|--|--|------|------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 2113 | Providing and fixing chromium plated brass shower rose with 15 or 20 mm inlet all complete. | EACH | 3.00 | 0.00033125 |
| 2114 | Providing & fixing in position P.V.C. water tank of Syntex or approved equivalent including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete for following capacities. GI pipes shall be paid separately under ST No. 2105. | | | |
| a | 1000 litres capacity | EACH | 2.00 | 0.00197958 |
| b | 2000 litres capacity | EACH | 2.00 | 0.00390624 |
| c | 5000 litres capacity | EACH | 1.00 | 0.00496491 |
| 2115 | Providing and fixing approved stainless steel sink with integrated drainboard as per IS:13983 of size 915x460x178mm with CI brackets, stainless steel chain with rubber plug 40mm, cp brass waste trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete as per spec. | EACH | 2.00 | 0.00116302 |
| 2200 SANITARY WORKS | | | | |
| Sanitary work including all labour, material, equipment etc. at any level as per specification, drawings and as directed by engineer - in - charge. | | | | |
| 2201 | Supply and fixing glazed vitreous china Wash Basin conforming to IS:2556 part 4 of oval shape with R.S. or C.I. brackets painted white, 15mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug, 32mm chromium plated brass bottle trap and waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, fittings, cutting and making good the walls where required etc all complete. | | | |
| a | White | EACH | 2.00 | 0.00115139 |
| 2202 | Providing and fixing approved vitreous china laboratory sink of size 600x400x200mm conforming to IS:2556 (part-5) with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 40mm, CP brass waste and 40mm CP brass trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete. | EACH | 2.00 | 0.00142391 |
| 2203 | Providing and fixing stainless steel kitchen sink of size 610x510x200mm conforming to IS: 13983 including all fittings etc. all complete. | EACH | 2.00 | 0.00101835 |

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| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
|--------|--|------|-------|-------------------------------------|
| 2204 | Providing and fixing colour glazed vitreous china European type water closet conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, necessary C.P connections etc all complete. | | | |
| a | Floor mounted | EACH | 3.00 | 0.00215479 |
| b | Wall mounted | EACH | 2.00 | 0.00156413 |
| 2205 | Providing and fixing colour glazed vitreous indian type Orissa pattern (580x440mm) water closet conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, necessary C.P connections etc all complete. | EACH | 2.00 | 0.00130422 |
| 2206 | Providing and fixing white flat back glazed vitreous china urinals of size 440x265x355 mm with photo voltaic control flushing system as per IS:2556 (part 6, section 1) with flush pipes, lead pipes, gratings, traps and necessary C.P. fittings etc. all complete. | EACH | 3.00 | 0.00336368 |
| 2207 | Supply, laying and jointing UPVC pipes of class 3 as per IS:4985 including bends, branches and all other necessary fittings, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete for following. | | | |
| b | 110mm dia pipes | RM | 25.00 | 0.00417925 |
| c | 160mm dia pipes | RM | 25.00 | 0.00632453 |
| 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 | 30.00 | 0.00289916 |
| b | 300mm dia | RM | 30.00 | 0.00449794 |
| c | 450mm dia | RM | 30.00 | 0.00873037 |
| b | 600mm dia | RM | 30.00 | 0.01030632 |
| e | 900mm dia | RM | 30.00 | 0.01967323 |
| 2209 | Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following. | | | |
| a | 150mm dia | RM | 15.00 | 0.00110129 |
| b | 250mm dia | RM | 15.00 | 0.00132273 |

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|--|---|------|-------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| c | 300mm dia | RM | 15.00 | 0.00181596 |
| d | 500mm dia | RM | 15.00 | 0.00270616 |
| 2211 | Providing and fixing C.I Manhole heavy duty cover of size 600mmx450mm including frame from reputed manufacture etc. all complete. | EACH | 5.00 | 0.00340894 |
| 2212 | Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete. | EACH | 5.00 | 0.00650567 |
| 2213 | Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber and water tight CI cover with 300x300mm (inside). The weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg etc all complete for following sizes: | | | |
| a | 100x100mm P or S Type. | EACH | 2.00 | 0.00048112 |
| b | 150x100mm P or S Type. | EACH | 3.00 | 0.0007855 |
| c | 150x150mm P or S Type. | EACH | 2.00 | 0.00056026 |
| 2214 | Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber and water tight CI cover with 300x300mm (inside). The weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg etc all complete for following sizes: | | | |
| a | 100x100mm P or S Type. | EACH | 2.00 | 0.00048112 |
| b | 150x100mm P or S Type. | EACH | 2.00 | 0.00052366 |
| c | 150x150mm P or S Type. | EACH | 2.00 | 0.00056026 |
| 2215 | Providing and fixing C.I. floor traps with C.P jalli all complete. | EACH | 10.00 | 0.00090262 |
| 2216 | Providing and fixing heavy duty UPVC floor traps with C.P jalli all complete. | EACH | 2.00 | 0.00011474 |
| 2217 | Providing and installing approved brand single tap water cooler of 80 L cooling capacity all complete. | EACH | 2.00 | 0.00700162 |
| 2218 | Providing and installing approved brand single tap water cooler of 150 L cooling capacity all complete. | EACH | 2.00 | 0.01145735 |
| 2219 | Providing and fixing white vitreous urinal partitions of size 675x325x85mm all complete. | EACH | 5.00 | 0.00111838 |
| 2220 | Providing and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS: 10592) all complete as per specification. | EACH | 2.00 | 0.00948692 |
| 2400 ROAD WORKS | | | | |

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| All civil and Architectural works required for Coal Handling Plant AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana. | | | | |
|--|--|------|---------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| Providing Road Work including necessary material, labour, machinery, transportation etc as per specification, drawing, relevant IRC & IS codes and as directed by the Engineer-in-charge for the following. | | | | |
| 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 | 630.00 | 0.01188306 |
| 2402 | Supplying and filling with selected good earth of approved quality in layers not exceeding 300 mm loose thickness using borrowed soil (borrowed soil to be arranged by the bidder) and compacted so as to achieve at least 95 % maximum dry density as per IS-2720 (Part-VII) including royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete. | CUM | 1575.00 | 0.04304211 |
| 2403 | Providing, stacking & laying granular morrum for shoulder including watering, compaction with road roller to required camber etc all complete. | CUM | 202.50 | 0.01532152 |
| 2404 | Providing & laying water bound macadam sub base course in layers of required thickness with crushed stone aggregates 90 to 40 mm down size, stone screening & blinding material including screening, sorting, spreading to template & consolidation with road roller including carriage, spreading & consolidation of blinding material moorum etc all complete. | CUM | 1656.00 | 0.22609882 |
| 2405 | Providing & laying water bound macadam base course in layers of required thickness with stone aggregate 63mm to 40mm size, stone screening and blinding material including screening sorting, spreading to template and consolidation with road roller including carriage, spreading and consolidation of blinding material moorum etc all complete. | CUM | 900.00 | 0.14178445 |
| A2409 | Providing, mixing & laying of dense bituminous macadam course of 70mm compacted thickness using bitumen of grade 60/70 conforming to IS 73, aggregates and binder material confirming to Grade-I of MORT-H & specification including hot mixing, hot laying, rolling etc all complete as per specification. | SQM | 3600.00 | 0.2380442 |

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All civil and Architectural works required for Coal Handling Plant AT **4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana.**

| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
|--------|--|------|---------|-------------------------------------|
| B2409 | Providing, mixing & laying of bituminous concrete of 40mm compacted thickness using bitumen of grade 60/70 conforming to IS 73, aggregates and binder material conforming to Table 500-18 of MORT-H & specification including hot mixing, hot laying, rolling etc all complete as per specification. | SQM | 3600.00 | 0.17014095 |
| A2411 | Providing and applying 5mm thk mixed seal coat with bitumen comprising of an application of a layer of bituminous binder using medium setting grade bitumen at the rate of 9.8kg/10sqm followed by a cover of medium coarse sand at the rate of 0.06 cum/10sqm including rolling etc all complete as per specification. | SQM | 3600.00 | 0.03395162 |
| 2413 | Providing & laying edge protection on both edges of black topping using brick on edge (bricks with crushing strength of 75 kg/cm ²) with full brick width (230 mm) etc all complete. | RM | 1800.00 | 0.01427444 |
| | Providing and placing concrete work including cost of labour, materials and equipment for handling, transportation, batching, mixing, placing, vibrating, shuttering, formwork and curing (excluding cost of reinforcement), with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specification and as per direction of engineer in charge for the following. | | | |
| 2418 | Providing and laying cement concrete of grade M30 using 20 mm nominal size stone aggregate with approved admixture (if required), provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing forwork etc. all complete. (Excluding the cost of reinforcement and dowel bar) | CUM | 10.00 | 0.00737279 |
| A2418 | Providing and laying cement concrete of grade M30 using Vaccum Dewatered Flooring (VDF) method with 20 mm nominal size stone aggregate with approved admixture (if required), provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing forwork etc. all complete. (Excluding the cost of reinforcement and dowel bar) | CUM | 240.00 | 0.19660793 |
| 2419 | Providing & laying dry lean cement concrete of grade M15 with 20 mm nominal size graded stone aggregate over a prepared sub-grade including compaction, finishing, curing etc all complete. | CUM | 160.00 | 0.12098964 |
| | REINFORCEMENT | | | |

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| All civil and Architectural works required for Coal Handling Plant AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana. | | | | |
|--|---|------|--------|-------------------------------------|
| ST. NO | DESCRIPTION OF ITEM | UNIT | QTY. | % weightage w.r.t. the total amount |
| 2420 | Providing and fixing in position MS dowel bar reinforcement including surface painted with bitumen and greasing, dowel end caps with cotton fills etc all complete as per specification, drawing and as directed by Engineer. | MT | 2.50 | 0.02021744 |
| 2421 | Straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500 confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc all complete as per specification, drawing and as directed by Engineer. | MT | 5.00 | 0.00556636 |
| 2422 | Providing, straightening cutting, bending, placing in position at any level, binding in position of steel reinforcement of mild steel reinforcements including cost of binding wire, labour, scaffolding transportation to & from stores etc all complete as per specifications, drawings and as directed by Engineer. | MT | 0.50 | 0.00341333 |
| MISCELLANEOUS | | | | |
| 2423 | Providing & installation of bitumen impregnated fibre board of specified thickness confirming to IS 1838 as joint filler including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete as per specification, drawing and as directed by engineer. | RM | 150.00 | 0.00409924 |
| 2424 | Providing and filling in position hot applied bitumen sealing compound (Grade A) of specified thick confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints, sealant primer etc all complete as per specification, drawing and as directed by Engineer. | RM | 150.00 | 0.00189702 |
| 2425 | Providing and laying debonding strip/tape of specified thickness before applying sealant including cleaning etc all complete as per specification, drawing and as directed by Engineer. | RM | 150.00 | 0.00141499 |
| A2428 | Providing and laying Impermeable plastic sheeting 125 microns thick laid flat without creases as per IRC 15-2002 etc all complete as per specification, drawing and as directed by Engineer. | SQM | 250.00 | 0.00259999 |
| GRAND TOTAL OF WEIGHTAGE | | | | 100 |

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