

**BILL OF QUANTITIES FOR**  
**CIVIL WORKS FOR 8MW POWER PLANT**

ITEM	Description	Unit	Quantity (approx)	Rate (Rs.) (*)	Amt. (Rs.) (*)
<b>[A]</b>	<b>EARTH WORK</b>				
A-1	Earthwork in excavation in all types of soil/rock but excluding hard rock requiring blasting at all depths in foundations of structures, pipe trenches, tunnels, sewer lines, drains etc. to required levels, grade and dressing complete as per specifications and directions of the engineer in both dry and wet condition including necessary pumping / bailing out of water, slush removal etc and disposal of the surplus excavated material in spoil dumps / fill areas at all heights and descents including leveling as directed by the Engineer, all material, tools plant and labour complete.				
a)	Lead up to 250 m	Cu m	4336.00		
b)	Lead above 250 m but not exceeding 500 m	Cu m	1442.00		
c)	Lead above 500 m but not exceeding 1000 m	Cu m	1767.00		
A-2	Backfilling in all positions and heights and descents in foundation, pits, pipe trenches, tunnels sewer lines, around foundations and structures, in plinth etc. with approved excavated material obtained from item A-1 above or 250 m including reclaiming from spoil heaps at all heights, transporting, depositing and dressing, complete as directed.				
a)	Ordinary filling in layers of 300 mm in thickness as specified but where no special compaction is required.	Cu m	2432.60		
b)	Plinth filling in layers of 150 mm thickness where special compaction is required including watering and consolidating either manually or by mechanical means to the required density as per the specification.	Cu m	2546.00		
A-3	Supplying and filling of coarse sand in foundations, plinth, underneath flooring and in soaking pits etc as shown in the drawing and as directed the Engineer, complete in all respects.	Cu m	325.00		
A-4	Supply and filling of moorum in foundations, plinth, including watering & compacting as per the specification and directed by Engineer	Cum	1517.00		

<b>[B] PLAIN &amp; REINFORCED CEMENT CONCRETES</b>					
B-1	Supplying, laying and compacting plain cement concrete as defined by IS: 456 in all mudmats / leveling courses including filling of loose pockets etc under foundations, pipelines, tunnels, floors etc at all depths below plinth level as per drawings, specification and instruction of the Engineer including curing but excluding the cost of shuttering, all materials tools, plants and labour complete.				
a)	With 40 mm and down graded aggregates. (1:4:8)	Cu m	768.00		
B-2	Supplying and laying reinforced cement concrete in all foundation and super structure in roof slabs, beams, floor slabs, footings, columns etc at all heights and depths above and below plinth level as per the drawings, specifications, directions of the Engineer and as defined in IS:456 including curing but excluding cost of shuttering and steel reinforcement all materials, tools, plants and labour complete:				
a)	With 20mm down graded aggregate for M15 grade concrete	Cu m	35.00		
b)	With 20mm down graded aggregate for M20 grade concrete	Cu m	6655.00		
c)	With 20mm down graded aggregate for M25 grade concrete	Cu m	760.00		
B-3	Supplying and placing damp-proof course 40 mm thick with concrete of grade M20 as defined by IS:456 with 6 mm and down graded stone aggregates including curing, with two coats of hot bitumen and sand spread over it as specified, all materials, tools, plant and labour complete.	Sq m	100.38		
<b>[C] STEEL REIMFORCEMENT</b>					
C-1	Taking delivery, transporting, placing and fixing in position steel reinforcement including angles / pins provided for the approved welded joints, at all levels for reinforced cement concrete and precast reinforced concrete works including cutting, bending, cranking, binding, tack welding as necessary as per drawings, specifications and direction of the Engineer including binding wire, cover blocks, electrodes etc. and straightening and coiling where necessary, all materials, tools, plant and labour complete.				
a)	With tor steel of all diameters	Ton	435.00		

<b>[D] INSERTS &amp; FOUNDATION BOLTS ETC.</b>					
D-1	Taking delivery and fixing in position as per drawings, specification and instructions of the Engineer, M.S. inserts, foundation bolts, anchor bolts, nuts, washers, curb angles, channels, pipes, pipe sleeves, rungs etc. for embedding in permanent concrete work at all heights and depths above and below plinth level including all connected works and adjustment in shuttering and reinforcement, all materials, tools, plant and labour complete.	Ton	10.00		
<b>[E]</b>					
E-1	Providing and fixing shuttering (formwork) in position with necessary centering, bracings. Propping etc. and removing the same after the specified periods for all types of shuttering for all plain and reinforced cement concrete works including all chamfers, splays, keys, wedges, nails, brackets, cutting holes for embedded steel / pipes and applying waste oil on shuttering surface in contact with concrete, all materials, tools, plant and labour complete.				
a)					
i.	Straight shuttering	Sq m	1345.00		
ii.	At and all depths below plinth level	Sq m	14650.00		
	At all heights above plinth level				
E-2	Providing fixing in position and removing shuttering as specified for core holes and pockets as per drawings, specifications and directions of the Engineer including applying waste oil on shuttering surface in contact with concrete and cleaning if core holes and pockets, all materials, tools, plant and labour complete.	Sq m	45.00		
<b>[F]</b>					
F-1	Providing and constructing one or more bricks thick brickwork using 50 grade bricks as defined in relevant IS code in cement sand mortar (1:5) in foundations, super structure, manholes, ducts, drains etc at all heights and depths above and below plinth level as per drawings specifications and direction of the engineer, including fair cutting, waste, bonding, plumbing, lining, leveling, flushing, raking joints, scaffolding and curing, all materials, tools plant and labour complete.	Cu m	1345.00		
F-2	Providing and constructing brickwork of half-brick thickness, using 50 grade bricks as defined in relevant IS code in cement sand mortar (1:4) with reinforcement at every fourth course at all heights and depths above and below plinth level for partition walls as per drawings, specification and directions of the engineer and including fair cutting, waste bounding, plumbing, lining, leveling raking joints, scaffolding and curing, all materials, tools plant and labour complete.	Sq m	65.00		

<b>[G] PLASTER &amp; FINISHING ITEMS</b>					
G-1	Providing and laying plaster with (1:5) cement sand mortar at and at all heights and depths above and below plinth level to faces of walls, pillars, columns, lintel sides, drains, jambs, column projections, narrow bands and widths etc including chipping and curing as per specifications, drawings and direction of the Engineer, all materials, tools, plant and labour completes.	Sq m	3845.00		
a)		Sq m	3520.00		
b)	15 mm thick	Sq m	440.00		
c)	20 mm thick				
	Extra for neat cement finish				
G-2	Providing drip course 30 mm wide and 15 mm deep at chajjas, sills and other outside projections at all heights above plinth level with cement sand mortar (1:4) all materials, tools, plant and labour complete.	Rmt.	180.00		
G-3	Providing two coats of cement paint of SUPER SNOWCEM or approved equivalent of different approved shades and as specified by the manufacturer to external plastered surfaces at all heights and depths above and below plinth level as per drawings and direction of the Engineer including scaffolding , cleaning and curing all materials, tools plant and labour complete.	Sq m	1790.00		
G-4	Providing three coats of white wash with lime over the plastered surfaces / concrete surface as per drawings and as specified at all heights and depths above and below plinth level including scaffolding, all materials, tools, plant and labour complete.	Sq m	1925.00		
<b>[H] FLOORING</b>					
H-1	Supplying and fixing glazed vitreous ceramic tiles of 1 <sup>st</sup> quality JOHNSON or 1 <sup>st</sup> quality BPT or approved equivalent in floor dado, skirting etc at all heights above plinth level, including providing 19 mm thick bedding of (1:3) cement sand mortar and each tile plastered on the beck side with neat cement slurry before fixing to the bedding mortar including filling and finishing of all joints with white cement grout and cleaning with saw dust and dilute sulphuric acid, curing etc as per drawings specifications and as directed by the Engineer, all materials, tools plant and labour complete.	Sq m	235.00		
H-2	Providing and laying 15 mm thick heavy duty floor hardener topping course with "IRONITE" @2.2 Kg/m <sup>2</sup> or approved equivalent including the bedding layer of 25 mm thick screed concrete (1:1:2) with 10 mm and down graded stone aggregate topping course laid over 25 thick granolithic floor finish whilst the screed concrete is still green, all according to the manufacturer's specification including trowel	Sq m	980.00		

	finishing and curing, all materials, tools, plant and labour complete.				
H-3	Supplying & fixing 25 mm thick kota stone on min. 20 mm thick bedding mortar as specified including, curing machine/wax polish in three operations with satisfaction of the Engineer, all materials, tools & labour complete.	Sq m	200.00		
H-4	Cement concrete flooring with 1:2:4 concrete (1 cement : 2 sand : 4 graded stone aggregate 20 mm Normal size) finished with a floating coat of neat cement i/c cost of glass strip of size of 40 x 4 mm for panels in flooring not exceeding 2.0 m <sup>2</sup> area. 40 mm thick	Sq m	565.00		
<b>[J]</b>	<b>DOORS, WINDOWS &amp; ROLLING SHUTTERS</b>				
J-1	Supplying, fitting and fixing in position Indian standard steel windows and ventilators with frames and shutters of different types according to IS:1038 with all joints flush butt welded including coupling bars for composite windows and ventilators, steel handles and peg stays with black chrome finish and all other steel fitting and fixtures like hinges, lugs, stoppers etc. and including cutting / drilling necessary holes in walls etc. and grouting lugs in the same with (1:2) cement sand mortar and finishing neatly, all materials, tools, plant and labour complete.	Sq m	205.00		
a)	Openable type	Sq m	35.00		
b)	Fixed type				
J-2	Providing glazing to doors, windows and ventilators as specified including supplying and fixing of approved quality clear sheet glass, including glazing putty, glazing clips etc. all materials, tools and labour complete (glazing will be measured on the basis of individual glass pane size as specified in IS:1038)	Sq m	135		
a)	5 mm thick float glass weighing approx 14 Kg/m <sup>2</sup> to openable steel / aluminum windows, doors.				
J-3	Supplying, fitting and fixing in position approved 18 gauge M.S. rolling shutters as specified with all accessories, ball bearings, side guides, 20 gauge hood cover of hexagonal shape, locking arrangement, handles to operate the rolling shutters and including cutting necessary holes in walls and grouting with (1 : 1½ : 3) cement concrete and finishing neatly to the satisfaction of the Engineer, all materials, tools, plant and labour complete (measurement of rolling shutters shall be the same as that of clear wall opening).	Sq m	36.00		
a)	Mechanically operated	Sq m	20.00		
b)	Manually operated				

<p>J-4</p> <p>a)</p> <p>b)</p> <p>c)</p>	<p>Providing and fixing aluminum anodized doors/windows ventilators made out of extruded aluminum section conforming to IS:733, IS:1285 &amp; IS:1868 with outer frame size 101.6 x 44.45 x 1.90 mm weighing 1.54 Kg/m and shutter frame made from aluminum section 47.62 x 44.45 x 1.90 mm weighing 0.97 Kg/m for vertical style and top rail bottom and lock rail are made from aluminum section 101.6 x 44.45 x 1.90 mm weighing 1.64 Kg/m including jointing with extruded aluminum cleats neoprene weather stripping gasket beveled edge beading, screws and 5.00 mm thick float glass sheets of good quality &amp; make including all fitting of superior quality (decorative type) such as door handles, tower bolts, hinges etc. complete including applying a coat of lacquer, as per direction of Engineer – in- charge duly fixed in walls with 16 x 3.15 mm lugs 10 cm long embedded in c.c. block 15 x 10 x 10 cm. size in C.C. 1:3:6 or with wooden plug and screws or with rawl plugs and screws or with fixing clips or with bolts and nuts as required.</p> <p>Openable</p> <p>Sliding</p> <p>Fixed</p>	<p>Sq m</p> <p>Sq m</p> <p>Sq m</p>	<p>40.00</p> <p>20.00</p> <p>15.00</p>		
<p><b>[K] WATERPROOFING</b></p>					
<p>K-1</p>	<p>Supplying, laying and fixing at all heights above plinth level bitumen felt water proofing 7 course treatment (i.e. two layers of flats) including prime and topping course of pea-sized gravel for roof with all necessary laps, as specification and according to IS:1346 with minimum 7 layers guarantee for water proof-ness including cutting chases in brickwork / concrete for anchoring tar felt in parapet and making good the chases with (1:4) cement sand mortar and curing, all materials, tools (1:4) cement and mortar and curing, all materials, tools, plant and labour complete (Measurement will be made for the finished net area only)</p>	<p>Sq m</p>	<p>405.00</p>		

**BILL OF QUANTITIES FOR CIVIL WORK FOR 350 TPD SPONGE IRON KILN  
(EXPANSION)**

SI No	Item Description	Unit	Quantity (aaprox)	Unit Rate (Rs)	Amount (Rs)
1	GR. HOPPER – 1 FOR COAL a) Excavation b) PCC c) Shuttering d) RCC e) Back filling f) Brick Work g) Pocket Shuttering h) Water proof plastering	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>2</sup> M <sup>3</sup>	125.00 10.00 172.00 30.00 30.00 7.20 0.00 84.00		
2	GR-HOPPER -2 FOR IRON ORE a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling f) Brick Work g) Pocket Shuttering h) Waterproof Plastering	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>2</sup> M <sup>3</sup>	125.00 10.00 172.00 30.00 30.00 7,20. 0,00 84.00		
3	CRUSHER HOUSE a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	216.00 15.00 96.00 80.00 161.00		
4	STOCK HOUSE a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	380.00 25.00 175.00 100.00 290.00		
5	ABC BUILDING a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	162.00 10.00 670.00 200.00 125.00		
6	ID FAN FOUNDATION a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	12.00 5.00 20.00 50.00 5.00		

7	E.S.P. FOUNDATION a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	48.00 4.00 20.00 100.00 40.00		
8	CONCRET CHIMNEY a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	170.00 5.00 920.00 550.00 50.00		
9	KI.M. PLANT a) Excavation b) PCC c) Shuttering d) Back filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	36.00 5.00 34.00 20.00 24.00		
10	KILN FOUNDATION a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling f) Pocket shuttering	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>2</sup>	1450.00 70.00 1400.00 1400.00 810.00 70.00		
11	K.C.T.B a) Excavation b) PCC c) Shuttering d) RCC	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	172.00 10.00 90.00 50.00 132.00		
12	COOLER FOUNDATION a) Excavation b) PCC c) Shuttering d) RCC e) Back filling f) Pocket Shuttering	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>2</sup>	328.00 20.00 422.00 200.00 140.00 66.00		
13	C.D. BUILDIN a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling f) Brick Work	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	100.00 20.00 60.00 40.00 20.00 9.00		



14	TR-1 a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling f) Pocket Shuttering	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	182.00 25.00 280.00 100.00 155.00 60.00		
15	TR-2 a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling f) Pocket Shuttering	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	182.00 25.00 280.00 100.00 155.00 60.00		
16	INTERMEDIATE BIN a) Excavation b) PCC c) Shuttering d) RCC e) Back filling f) Pocket shuttering	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	300.00 50.00 450.00 200.00 300.00 100.00		
17	PS BUILDING a) Excavation b) PCC c) Shuttering' d) RCC e) Back Filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	190.00 15.00 96.00 100.00 145		
18	PRODUCT STORAGE SILO (FOR DRI LUMPS – 2 nos a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	375.00 20.00 2168.00 750.00 160.00		
19	PRODUCT STORAGE SILO FOR DRI FINES ) – 1 NO a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	125.00 5.00 650.00 290.00 64.00		
20	COAL SHED a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	182.00 5.00 86.00 150.00 162.00		

21	CHAR STORAGE a) Shuttering b) RCC c)	M <sup>3</sup> M <sup>3</sup>	184.00 50.00		
22	CONVEYOR GANTRY WITH TRUSSEL a) Excavation b) PCC c) Shuttering d) RCC e) Back Filling	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	150.00 20.00 170.00 125.00 60.00		
23	COMPRESSOR ROOM a) Excavation b) PCC c) Shuttering d) RC C e) Back Filling f) Brick Work	M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup> M <sup>3</sup>	51.00 30.00 78.00 50.00 48.00 36.00		
24	Land development – filling & leveling	M <sup>3</sup>	5000.00		