



**BHARAT HEAVY ELECTRICALS LIMITED**  
**RAMACHANDRAPURAM::HYDERABAD::32**  
**FACTORY CIVIL ENGINEERING DEPARTMENT**

SCHEDULE- A

Tender Notice No:

HY/FCD/OT-09/2011-12, Dt:- 09.08.2011

PRICE BID

Item no : 3

**Name of work: Maintenance of Structural steel works, sheet roofing, rain water pipes, cleaning of cob webs in Factory Area (South Zone).**

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
1	Repairing the leaking PVC joints of rain water pipes, at all levels in factory blocks. The work includes opening of joints, cleaning properly and applying sealing compound to arrest further leakages in the joints. The rate quoted shall include cost of all jointing materials and labour etc., complete.	150.00	Each	43.34	6,501.00
2	Closing of sheet cracks, bolt holes or any punchers in the A.C. sheets at roof levels. (Required consumable materials will be supplied by BHEL free of cost at their stores).	150.00	Each	10.45	1,567.50
3	Removing of old A.C. sheets, translucent sheets from roof, side walling of factory blocks, sheds and refixing with new/old sheets at all heights including transportation of A.C. sheets and disposing off old sheets to a lead of 2 K.Ms. etc., complete as directed. (Required consumable materials will be supplied by BHEL free of cost at their stores).	1,750.00	Sq.M	72.82	1,27,435.00
4a	Supplying and fixing of Tracdek Hi-rib single skin bare galvalume / Zinalume sheets of 0.5 mm thick. One Meter width and length upto 12 M with Factory cut and fixing to the roof shall be crest fixed to roof purlins with number 12 14 x 55 mm long polymer coated galvanized hex-head self drilling screws with integral washers and EPDM seals (4 fasteners for per support) for sheet etc., complete as directed. (including cost of galvalume sheets) - <b>for roofing-Plain.</b>	12.50	Sq.M	545.90	6,823.75
b	.. do .for louvers and cladding ( <b>colored</b> )	25.00	Sq.M	672.40	16,810.00
5	Removing old G.I. bolts, nuts and washers from the existing A.C. sheeting work or roofs and side cladding of factory blocks and fixing with new G.I.6.5mm dia 'L' bolts with nuts, washers, bitumen washers etc., complete as directed. The new G.I. bolts should be dipped in Acid/Alkali resisting paint before fixing in position. The bolts, nuts and washers etc., should be suitable as per site conditions. (GI 'J' Bolts & 'L' Bolts, washers and nuts will be supplied by BHEL at their stores).	250.00	Each	3.30	825.00

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
6	Removing the existing broken A.C./M.S. spiral pipes and fixing new P.V.C. pipes of 100 mm to 159 mm dia and of standard length including cost of jointing materials, labour, conveying new pipes and dismantled pipes to stores etc., complete as directed. (P.V.C. pipes and specials will be supplied by BHEL free of cost at their stores).	150.00	R.M	88.55	13,282.50
7	Fabricating and fixing MS Clamps of 50 mm width fabricated with MS flat/plate of 3.15 to 5 mm thick for PVC pipes of 150 mm dia at all heights of blocks, drilling suitable holes for clamping the pipe with bolts of 16 mm dia of suitable length with nuts, welding the clamps to the MS columns etc., complete as directed by Engineer-in-charge. The rate quoted shall include cost of bolts, nuts and washers, painting two coats with Synthitc Enamel paint over a coat of red oxide primer. (MS plates, flats, acetylene, oxygen will be issued at free of cost by BHEL at their stores)	75.00	Each	36.00	2,700.00
8	Fixing M.S./G.I. flashing over the roof of factory blocks or outside walkways, gutters and around ducting including cutting, bending, fixing in position etc., complete as directed by Engineer-incharge.	50.00	Sq.M	119.00	5,950.00
9	Making locking arrangements to panelled steel door shutters, sliding doors/rolling shutters such as aldrops, tower bolts if any. Such arrangements including gas cutting, welding etc., complete as directed by Engineer-in-charge.	25.00	Each	337.00	8,425.00
10	Fabrication and erection of panelled steel door shutter sliding or hinged, including gas cutting, welding of sheets or angles wherever required etc., complete as directed by Engineer-in-charge. (Structural steel sections will be issued free of cost by BHEL).	25.00	Sq.M	248.00	6,200.00
11	Dismantling M.S. partitions (Weldmesh, glazed or panelled) of standard size 1.20 M x 2.40 M or 1.20 x 3.30 M including M.S. Posts and transporting and stacking the materials for reuse etc., complete as directed by the Engineer-in-charge (The rate shall include cost for removing glass panes before dismatling glazed partitions and stacking glass panes)	37.50	Each	643.35	24,125.63
12a	Fabrication of M.S. partitions, (weldimesh, glazed or panelled) of the following sizes as directed. (Strl. Steel sections will be issued free of cost by BHEL). i. Size 1.20 M x 2.40 M.	3.50	Each	562.85	1,969.98
b	ii. Size 1.20 M x 3.30 M.	3.50	Each	757.10	2,649.85
13a	Erection of M.S. partitions (No fabrication) weldmesh / glazed or panelled of the following sizes,with required M.S. posts for fixing with nuts and bolts, drilling holes in cement concrete floor complete as directed by Engineer-in-charge. The rate shall include cost of fixing glass panes after erection of partition frame in case of glazed partition. i. Size 1.20 M x 2.40 M	2.50	Each	447.60	1,119.00
b	ii. Size 1.20 M x 3.30 M size.	2.50	Each	649.80	1,624.50

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
14	Erection of steel doors for M.S. steel partitions of cabins (weldmesh, glazed or panelled) with required M.S. posts and all accessories such as hinges, aldrops etc., including gas cutting, welding etc., complete as directed by Engineer in-charge. (The rate shall include for fixing glass panes after erection of door in case of glazed doors). (Approximate size 1.20Mx2.40M)	5.00	Each	376.80	1,884.00
15	Fixing of weldmesh / expaned metal to MS angle iron frame of suitable size for RCC louvers/ceiling including gas cutting and welding as directed by the Engineer-in-charge. (M.S. angle iron frame, weldmesh/expanded metal will be supplied by BHEL at their stores at free of cost).	50.00	Sq.M	69.65	3,482.50
16	Dismantling of weldmesh / expanded metal from ceiling including gas cutting etc., complete as directed by Enginner-in-charge. The dismantled materials should be handed over to BHEL stores for reusing the same wherever it is required.	17.50	Sq.M	36.70	642.25
17	Fabrication of structural steel work including all materials going into the process of fabrication and forming an integral part of steel work together with all shop and site welding as necessary and all site connections. The rate shall include painting with one coat of red oxide as per I.S. specification and all site charges for handling, leading and loading and unloading of materials at fabrication yard. (The raw structural steel sections acetylene, oxygen will be issued free of cost).	20.00	MT	7,563.80	1,51,276.00
18	Erection of structural steel work outlined in above item including the charges for handling, leading and stocking at the site at approved locations prior to erection include all site welding, revittings, bolting, jointing and site welding etc., complete.	20.00	MT	3,241.60	64,832.00
19	Dismantling the existing structural steel work carefully by loosening nuts, gas cutting as per the site conditions for reuse and stacking at site/handing over to stores as directed by Engineer-in-charge.	7.50	MT	1,844.90	13,836.75
20	Dismantling the existing structural steel work Carefully by loosening nuts, gas cutting as per the site conditions and re-erecting the same, suitably modifying by gas cutting, welding, drilling new holes, jointing the new members by welding or bolting etc., complete.	5.00	MT	5,505.90	27,529.50
21	Erection of cycle shed of <b>5 spans</b> including erection of steel posts, trusses and purlins and fixing of Galvalume /A.C. sheets and ridges, using 'J' bolts, nuts, etc., complete as directed by Engineer-in-charge. (labour charges only)	2.50	Each	7,610.65	19,026.63
22	<b>Earth work in excavation in all soils</b> by mechanical means (Hydraulic Excavtors) / manual means in foundations trenches or drains (not exceeding 1.5m in width or 10 Sq.m on plan) including dressing of sides and ramming of bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50M.	5.00	Cu.M	103.40	517.00

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
23	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering including consolidation by vibrations for all works up to plinth level with <b>1:4:8</b> (1 cement : 4 coarse sand : 8 graded stone aggregate of 20 mm nominal size).	5.00	Cu.M	2,449.00	12,245.00
24	Dismantling of cycle shed of 5 spans including removal. Transporting and stacking at BHEL stores or any other place (upto 2 KMs. lead) for reuse of A.C. sheet, ridges, purlins, trusses, columns, etc., complete. Steel columns shall be loosened by breaking concrete using necessary tools etc., as directed by Engineer-in-charge.	2.50	Each	4,833.85	12,084.63
25	Removing the existing A.C. sheets carefully from factory blocks and ceiling along with 'J' bolts, nuts etc., of steel cabins and cycle sheds, transporting and stacking at BHEL stores or other specified places (upto 2 KMs., lead) as directed by Engineer-in-charge.	150.00	Sq.M	43.65	6,547.50
26a	Fabrication and fixing of M.S./G.I. pipes/M.S. round for railings to crane gantries. Catwalkways at all heights by jointing or connecting through threading, welding etc., complete.	100.00	RM	85.10	8,510.00
b	-----do----- ground level	50.00	RM	72.35	3,617.50
27a	Fabrication bending to shape and erection of <b>rain water gutters</b> at roof level including all materials going into the process of fabrication and fixing an integral part of steel work together with all rivets and electrodes for shop or site weldings necessary and all site conditions. The rate shall include removal of old/spoiled valley /eaves gutters, painting with one coat of red oxide as per relevant IS specification before erection and also for all charges for handling, loading and unloading of materials at fabrication yard. The work has to be executed at full height of the blocks. The rate shall include removal and refixing of A.C sheets and North light glazing. a. Valley gutter of 750 mm size using 3.15 mm to 5 mm thick plate made into required shape.	100.00	RM	564.10	56,410.00
b	Eaves gutter of 400 mm dia using 3.15 mm to 5 mm thick plate.	5.00	RM	345.00	1,725.00
c	walk ways of size varying from 1.20 M to 1.60 M using M.S. angles of size 60 x 60 x 6 mm / 45 x 45x 6 mm and M.S. pipes of 20 mm dia.	10.00	RM	228.00	2,280.00
28	Fixing wooden planks for walkways in factory blocks including cutting to size. Drilling holes to wooden planks, cost of bolts, nuts and washers etc., complete but excluding cost of wooden planks which will be supplied by BHEL free of cost at their stores.	150.00	Each	56.00	8,400.00
29	Supplying and fixing aluminium strips for fixing wire glasses including removal and disposal of the existing damaged aluminium strips to specified places (upto a maximum lead of 2 KMs.) etc., complete. The strips should be suitable to the glasses which will be fixed against item No. 31.	50.00	RM	141.00	7,050.00

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
30	Cleaning of North light glasses on both sides at roof level of factory blocks with paint remover or any suitable chemical solution to the satisfaction of the Engineer-in - charge. The glazing will be consisting of 1.52 M and 1.22 M with an overlap and air gap. (BHEL asses one U.S.W. for cleaning for 5.00 Sq.m).	550.00	Sq.M	41.92	23,056.00
31	Transporting and fixing in position of North light glazing to factory blocks including fixing of wired glasses, aluminium strips, glazing runners, accessories, bolts, nuts, washers, clamps etc., complete (Only labour charges are to be quoted and all materials will be issued on free of cost by BHEL at their stores).	75.00	Sq.m	76.50	5,737.50
32	Repairs to sliding doors / rolling shutters / panelled type doors / collapsible gates etc., in factory area including lowering of shutters, repairing in all respects such as straightening of bends, welding of sheets or angles, wherever required and re-erecting the same including locking arrangements, before and after closing the doors. The doors are to be finished in good condition as directed by Engineer-in-charge.				
a	Repairs / Replacement of hinges.	25.00	Each	103.30	2,582.50
b	Locking arrangements	5.00	Each	85.00	425.00
c	Repairs to shutters	400.00	Sq.m	287.50	1,15,000.00
33	Removing the existing unserviceable collapsible shutter and handing over to stores, supplying and fixing in position new collapsible steel shutter with vertical channels 20 mm x 10 mm x 2 mm braced with flat iron diagonals 20 mm x 5 mm size with top and bottom rails or M.S. 'T' 40 mm x 40 mm x 6 mm with 38 mm dia steel pulleys complete with bolts and nuts. Locking arrangements, stoppers, handles including applying one coat of red oxide primer before erection and two coats of synthetic enamel paint of approved colour and brand after erection etc., complete including cost of all materials etc., complete.	12.50	Sq.M	2,592.70	32,408.75
34	Removing the existing unserviceable rolling shutters and handing over to stores. Supply and fixing new rolling shutter of approved make, made of 80 x1.25 mm M.S. laths interlocked together through their entire length and jointed together through their entire length and jointed together at the ends by end locks mounted on specially designed pipe shaft with bracket plates, guide channels and arrangement with inside and outside locking including the cost of supply and fixing the hood cover 1.25 mm thick, Helical springs 2 Nos 27.5 cms long, ball bearings requisite number of approved make and brand, gear box with crank handle, with one coat of red oxide primer and two coats of synthetic enamel paint of approved brand and shade including cost of all materials etc., complete.	5.00	Sq.M	1,208.45	6,042.25

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
35	Repairs to steel windows ventilators such as welding of rivets, flats, pegstays, stoppers, parliamentary hinges and strightening of bends in the frame work etc., complete (Plates and pegstays will be given on free of cost at BHEL stores).	100.00	Sq.M	88.55	8,855.00
36	Removing cobwebs, including cleaning the dust from the roof sheeting, structures, wired glasses, cranes, girders, gantries, side sheeting and cladding and from top of internal annexes, cabins partitions and sweeping the floor of the resultant dust and waste and disposing the same to specified places (Upto a lead of 2 KMs.) as directed by Engineer-in-charge. (The measurement will be as per the floor area of the factory blocks).	2,50,000.00	Sq.m	0.62	1,55,000.00
37	Cleaning of valley gutters over the factory roof including cleaning the dust, muct etc., from the A.C. sheets and pouring the waste materials through buckets or with gunny bags by arranging all necessary safety precautions and disposing off the same to specified areas (Upto a lead 2 KMs.) as directed by Engineer-in-charge. The rate shall include for sweeping of factory floors to remove any dust fallen during the operations. (The measurements as per rain water gutter lengths.)	2,500.00	RM	1.50	3,750.00
38	Cleaning of roof, roof terraces with brooms and brushes and removing the debries including removing the weeds on the walls and terraces, canopies, chajjas etc., complete. (Payment will be made as per plinth area of the building.)	25,000.00	Sq.m	0.64	16,000.00
39	Cleaning glass panes of window, partitions with paint remover and thinner, to remove the strains on both sides of glasses. (Payment will be made to one side area of the glasses only).	400.00	Sq.m	5.50	2,200.00
40	Supply and fixing glazed steel windows and ventilators of approved make including supply and fixing 4 mm thick plain glass with best quality putty. MS handles and peg stays including painting with two coats of synthetic enamel paint over one coat of red oxide paint including supplying and fixing weldmesh 50 x 50 mm (8G x 8 g). The window section and fabrication shall confirm to I.S. 1038.	3.00	Sq.m	1,114.00	3,342.00
41	Removing of AC sheet over annexe terrace and cleaning the terrace and refixing the AC sheets after cleaning etc., complete as directed by Enginner-in-charge.	100.00	Sq.M	31.40	3,140.00
42	Supply & fixing in position stainless steel fly mesh of 20 x 30 G including fixing with suitable MS flats including cutting mesh and flat to required size, fixing neatly with necessary welding, riveting, cost of all materials and labour etc. complete. (Acetylene, oxygen will be issued by BHEL on free of cost).	35.00	Sq.M	400.00	14,000.00

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
43	Supplying and fixing of 50mm (2") dia stainless steel tubular railings (pipe of A304 grade 1.2 mm thick) as per design and drawing of BHEL. The cost will include bending, welding/brazing, buffing, polishing, fixing to the plumb, wastage, etc., complete. The above pipe will be used for hand railing, vertical pipe, horizontal pipe as per requirement. (The vertical pipe will be embedded in concrete for a depth of 45 cm from finished floor level along with necessary hold fasts. The verticals will be at intervals of 1.2 M to 1.5 M). The payment will be made for finished quantity measured above finished floor level).	9.00	RM	1,435.00	12,915.00
44	Supply and fixing 5 mm thick polycarbonate sheets and anodised aluminium glazing bars together with accessories complete for North light glazing including cost of all materials, labour etc., complete.	35.00	Sq.m	1,207.50	42,262.50
45	Fixing of Tracdek Hi-rib single skin bare galvalume / Zinalume sheets of 0.5 mm tk. 1 mtr width and length upto 12 mts with factory cut and fixing to the roof shall be crest fixed to roof purlins with number 12-14 x 55 mm long polymer coated galvanised hex head self drilling screws with integral washers and EPDM seals (4 fastners for support) for sheet etc., complete as directed (Excluding cost of galvalume/Zinalume sheets which will be issued on free of cost by BHEL at their stores) - For roofing, side cladding and louvers with necessary fixtures.	75.00	Sq.m	100.00	7,500.00
46	Supply and fixing North Light curves in required girth with 0.5 mm color galvalume sheets upto a length of 2.5 M having curved width upto 600 mm fixing to the steel members with self drilling / self stitching, fasteners at a maximum of 500 mm c/c along the length of capping, flashing etc., complete as directed by Engineer-in-charge including the cost of galvalume sheets, labour etc., complete.	35.00	Sq.m	720.00	25,200.00
47	Repairs to Aluminium rolling shutters by replacing the damaged aluminium strips with new one. The rate quoted shall include the cost of all materials, labour for fixing etc., complete. VAT 14.5% is inclusive on cost material. (The payment will be made for the finished area of aluminium strips replaced only).	17.50	Sq.m	590.35	10,331.13
48	Supplying and fixing plain PVC pipe of 200 mm dia of 6 kg's/cm <sup>2</sup> of approved quality with specials, accessories and approved sealing / jointing compound on the exterior of the inserted portion of the fitting and fixing in position and joining to MS gutters, including cost of all materials, sealing compound, labour etc., for all heights complete.	35.00	RM	640.17	22,405.95

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
49	Supplying and fixing plain PVC pipe of 160 mm dia of 6 kg's/cm <sup>2</sup> of approved quality with specials, accessories and approved sealing /jointing compound on the exterior of the inserted portion of the fitting and fixing in position and joining to MS gutters, including cost of all materials, sealing compound, labour etc., for all heights complete.	35.00	RM	412.40	14,434.00
50	Painting at site of all structural steel work with 2 coats of aluminium paint / synthetic enamel paint of approved shade to trusses, columns, girders, bracings etc., as required etc., complete as directed. The required paint EXCEPT Redoxide primer only will be issued by B.H.E.L at FREE of cost at their stores.	50.00	MT	596.50	29,825.00
<b>Total Value of work</b>				<b>Total Rs:</b>	<b>11,86,317.53</b>
<b>Total : Rs. Eleven lakhs eighty six thousand three hundred and eighteen only</b>					

- Note:**
- 1) Service tax is extra as applicable, which will be reimbursable to the agency on production of Valid documents and VAT not Applicable.
  - 2) Minimum 1 (SW), 1 SSW (Welders) and 3 USW (Helpers) shall be engaged throughout the year, to attend day to day maintenance activities under the above scope of work.
  - 3) The above work force shall be covered with all statutory payments and PPE's, Bonus etc as specified by BHEL/statutory authorities from time to time.

**Note :** The bidders are required to quote the tender value on percentage (%) basis at excess or less or on par with estimate value

Tender %	In figure	In words
Excess		
Less		
Estimated value		

Name of the Contractor :

Signature of the Contractor

Accounts Representative

Opening officer