

# TENDER

TENDER NOTIFICATION NO. - FCX/20211002

FOR

**Repair/replacement of damaged roof/wall sheets,  
gutters etc. and rain water PVC pipe & specials in  
various block inside factory area.**

**PRICE BID**



**FACTORY CIVIL CONSTRUCTION & MAINTENANCE DIVISION**

**BHARAT HEAVY ELECTRICALS LIMITED**

**(A Government of India Undertaking)**

**BHOPAL – 462 022 (M.P)**

## PREAMBLE OF PRICE BID

**1.0** This Price Bid consists of Three Schedule:

### **1.1 Schedule A**

Schedule A consists of Three Annexure:

Total price of the package combining **Annexure I , Annexure II & Annexure III** to be quoted by the bidders which shall form the basis for comparison for deciding lowest bid. For further processing and award, total quoted amount by the L1 (lowest) bidder for the package shall be used for deriving individual item rate by BHEL based on % (percentage) weightage specified at Annexure I , Annexure II & Annexure III of Price Schedule.

### **1.2 Schedule B**

It consists of details of free issue materials by BHEL.

### **1.3 Schedule C**

It consists of details of tools & tackles provided by BHEL either on higher basis or on free of cost basis which are mentioned in price bid.

**2.0** The work to be carried out under the contract shall, except as otherwise provided in tender conditions, include all labour, materials, tools, plant, equipment, and transport which may be required in preparation of and for full & entire execution and completion of the Works. The descriptions given in the Schedule of Quantities shall, unless otherwise stated, be held to include waste on materials, carriage and cartage, carrying in return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion as aforesaid in accordance with good practice and recognized principles as laid down in Technical Specification & elsewhere in Tender Specification.

**3.0** The price bid should not contain any condition. Conditional price Bids shall be summarily rejected.

**4.0** The bidder should not leave any column blank in Price Schedules.

**5.0** Price Quoted shall include all taxes, & duties except **GST**.

**6.0** Unless otherwise specified in the items involving cement, reinforcement steel or structural steel, these items shall be issued free of cost by BHEL.

**FACTORY CIVIL CONSTRUCTION & MAINTENANCE DIVISION****TENDER NOTIFICATION NO. - FCX/20211002****Price Schedule**

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

**SUMMARY**

	Details ANNEXURE	Total Amount (Rs.)
	Total price of the package combining of Annexure-I, Annexure-II & Annexure-III	

Amount in words: Rs.

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Total price of the package combining of Annexure-I , Annexure-II & Annexure-III to be quoted by the bidders which shall form the basis of comparison for deciding lowest bid.

For further processing & award total quoted Amount for the package by the L1 (lowest) bidder shall be used for deriving Individual item rate by BHEL based on % (percentage) weightage specified at Annexure-I , Annexure-II & Annexure-III of Price Schedule.

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: I

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
1		Carriage of materials by mechanical transport including loading, unloading and stacking -			
a)	1.1.1	Lime ,moorum, building rubbish-1 km	20.00	cum	0.0730
b)	1.1.11	Steel 1 km. lead	1.00	tonne	0.0032
c)	Ana.	Sheets of any type up to 1 km lead	10.00	tonne	0.0493
d)	1.1.17.1	AC pipes 100mm up to 1 km lead	60.00	metre	0.0048
e)	1.1.17.3	AC pipes 150mm up to 1 km lead	130.00	metre	0.0173
2	**	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All work upto plinth level. (Cement free issue by BHEL)			
	5.1.3	1 : 2 : 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	1.00	cum	0.1524
3	Ana. 5.22.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. (Reinforcement bars will be supplied free of cost from BHEL store).			
		Thermo-Mechanically Treated bars.	500.00	Kg	0.2038
4	Ana. 10.2	Structural steel work riveted ,bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete..(Structural steel & primer will be issued free of cost from BHEL stores).	2050.00	Kg	1.4739

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: I

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
5	Ana. 13.50.3	Applying priming coat With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works (Excluding cost of primer which shall be issued free of cost by BHEL).	190.00	sqm	0.1722
6	Ana.	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade:(Paint free issue from BHEL store)			
	13.61.1	Two or more coats on new work.	240.00	sqm	0.4687
7	Ana. 13.63.1	Painting with aluminium paint of approved brand and manufacture to give an even shade: (Excluding cost of Aluminium paint and putty which shall be issued free of cost from BHEL store ).			
		Two or more coats on new work	240.00	sqm	0.4773
8	15.3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.	1.00	cum	0.0539
9	15.19	Dismantling steel work manually/ by mechanical means in built up sections without dismembering and stacking within 50 metres lead as per direction of Engineer-in-charge.	980.00	kg	0.0567
10		Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 metres lead of :			
a)	15.28.1	G.S. sheet	200.00	sqm	0.5035

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: I

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
b)	15.28.2	Asbestos sheet	2490.00	sqm	2.9631
11		Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :			
a)	15.42.2	100 mm dia pipe.	100.00	metre.	0.1184
b)	15.42.3	150 mm dia pipe.	340.00	metre.	0.4149
12		Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :			
	19.21.1	For pipes 100 to 230 mm diameter	20.00	each	0.2665
		Total :			7.4729

Note: Dismantling of GI/PVC rain water down take pipes and fittings shall also be paid under item no. 11 of Annexure I.

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: II

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

Sr. No.	Item Description	Qty.	Unit	% Weightage of item amount against total amount
1	Fixing non-asbestos high impact Polypropylene reinforced cement 6 mm thick/ Asbestos cement corrugated sheets (as per IS : 14871 ) roofing up to any pitch and fixing with polymer coated J or L hooks, bolts and nuts 8 mm dia G.I. Plain and bitumen washers or with self drilling fastener and EPDM washers etc. complete excluding the cost of purlins, rafters and trusses corrugated sheets and including cutting to size and shape wherever required <b>(Including the cost of fixtures but excluding the cost of sheets which shall be supplied free of cost from BHEL store )</b> .	2560.00	sqm	6.4990
	<b>Note: Cost of unscrewing of nuts, bolts etc. of adjacent sheet (if required) and screwing/ fastening of the same after replacement of sheets are included in this item. If new nuts, bolts , screw are required same is to be provided by the contractor itself.</b>			
2	Fixing ridges and hips in non-asbestos fibre cement high impact polypropylene reinforced roofing sheet / A.C. sheet roofing with suitable fixing accessories or self drilling fastener and EPDM washer etc. complete. <b>(Excluding cost of ridges which shall be issued free of cost from BHEL store.)</b> .			
	Corrugated serrated adjustable ridges	70.00	metre	0.1377
3	Replacement of MS/galvanised gutter at various heights in fy. Blocks and sheds including fixing of nuts, bolts , washers and making cut out for rain water pipe etc. ( <b>Note: Only Gutter shall be provided by BHEL. )</b>	190.00	sqm	2.0753

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: II

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

Sr. No.	Item Description	Qty.	Unit	% Weightage of item amount against total amount
4	Repairing of joints of PVC pipes with solutions / chemicals up to maximum height of 30 metres (approx) (Note:- Repairing of joints shall include jointing of accessories like couplers/ bends/ tees etc.which may be found disaligned/ misplaced from their original place.But if accessories like : couplers/ bends/ tees etc.found damaged, they shall be replaced with new ones which shall be payable against respective items of this shedule.)			
	a) 110mm dia	40.00	each	0.0106
	b) 160mm dia	100.00	each	0.0835
	c) 200mm dia	100.00	each	0.1367
5	Fixing on wall face unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS:5382 leaving 10 mm gap for thermal expansion.(i) Single socketed pipes:( <b>only Pipe shall be issued free of cost from BHEL</b> )			
	Pipes of all diameter	390.00	metre	1.4911
6	Fixing on wall face unplasticised-PVC moulded fittings/accessories for unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion:( <b>Only fittings shall be issued free of cost from BHEL</b> )			
	All types of fiitings with all diameter	100.00	each	0.8198



## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: II

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

Sr. No.	Item Description	Qty.	Unit	% Weightage of item amount against total amount
7	Labour only for laying of self adhesive waterproofing membrane consisting of self adhesive SBS (Styrene Butadiene Styrene) modified / bitumen compound covered on the top side with high density cross – laminated polyethylene film and on the underside with an easy – to-peel silicon film on the existing roof of fy.buildings/stores/sheds/ manufacturing blocks at any height upto a maximum of 35.0 M after neatly cleaning the surface and making it dry and applying primer.It is to be used for arresting any type of water leakages. <b>Self adhesive water proofing membrane and it s primer shall be issued free of cost from BHEL stores.</b> Rate is inclusive of necessary tools and plants required for the above treatment and labour charges etc. complete.	390.00	sqm	1.7039
8	Making leak proof from leakge of 100mm to 200mm dia CI/ G.I./A.C./P.V.C rain water down comer pipes and specials at various heights in Fy. Blocks and sheds including cleaning old surface and applying new layers of bitumen compound/ self adhesive SBS (Styrene Butadiene Styrene) modified to stop the leakage.(Bitumen compound/ SBS (Styrene Butadiene Styrene) modified to <b>be issued by the department free of cost).</b>	560.00	Joint	1.2375
9	Fixing of polycarbonate sheet in northlight glass after cutting it to shape and size and fixing with EPDM gasket , self tapping screw etc. The above item includes the cost of labour, EPDM gasket, self tapping screw etc. but excluding the cost of polycarbonate sheet.( <b>The polycarbonate sheet shall be provided by BHEL free of cost)</b>	100.00	Sqm	2.1833

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: II

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

Sr. No.	Item Description	Qty.	Unit	% Weightage of item amount against total amount
10	Lowering of dismantled / loose sheets of any type lying on the roof top of the manufacturing block/ shed including stacking at designated place near the respective manufacturing block.			
	Sheets of all dimensions	1150.00	Each	5.0254
11	Carriage of PVC pipe up 1 KM lead as per the direction of Engineer-in-charge.			
		7.00	tonne	0.7629
12	Fixing of north light curve , flashings, ridges etc. in the required shape and size with self tapping screw , EPDM washers etc. complete. ( Note: North light curve ,ridges, flashings etc. of galvalume shall be provided by BHEL free of cost but cost of screw, nuts and bolts are in the scope of contractor).			
		460.00	metre	2.2618
13	Cleaning accumulated dirt/ dust/ rubbish including vegetation / any other obstruction from Valley gutter of factory Blocks and sheds so as to make it obstruction free to prevent spill over / overflow of water from the gutters and stacking it due to dirt, dust and rubbish etc. including collecting / lowering of waste material near the respective block / shop floor/ shed .			
		26100.00	metre	7.1321

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: II

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

Sr. No.	Item Description	Qty.	Unit	% Weightage of item amount against total amount
14	Supply and installation of coated galvalume steel sheet having maximum of pitch of 205 mm c/c and minimum 28 mm crest depth in length for roofing / side cladding as per site requirement. The supplied material is to be manufactured out of 0.50 mm TCT (Total coated thickness) and 550 MPA tensile strength, with zinc aluminium alloy of AZ-150 (As per AS-1397:1993). The sheet shall have a hot dip metallic zinc aluminium alloy coating of zinc (43%), silicon (1.5%) and aluminium (55%) with total mass coating of 150 gms/sqm considering both sides together , self drilling/self tapping screws with EPDM seal fixed to the existing MS purlins/MS runners complete as per drawing and as directed by engineer-in-charge. Colour of the sheet shall be as per this instructions of engr-in-charge.	200.00	sqm	5.3357
	<b>Total :</b>			<b>36.8963</b>

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: III

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

Sr. No.	Item Description	Qty.	Unit	% Weightage of item amount against total amount
1	Providing and fixing on wall face unplasticised- Rigid PVC rain water pipes conforming to IS : 4985/2000 class 2 including jointing with solvent cement to form a permanent water tight joints.(Working pressure-4.0 kgf/sqcm).(i) Single socketed pipes:			
i	160 mm dia.	800.00	metre	19.4310
ii	200 mm dia.	800.00	metre	22.2169
2	Providing and fixing on wall face unplasticised-PVC moulded fittings/accessories for unplasticised - Rigid PVC rain water pipes conforming to IS : 4985/2000 class 2 including jointing with solvent cement to form a permanent water tight joints.(Working pressure-4.0 kgf/sqcm):			
a	Coupler			
i	160mm	150.00	each	1.3558
ii	200mm	50.00	each	0.6722
b	Single Tee without Door			
i	160x160x160mm	30.00	each	0.3623
c	Bend 87.5 degree			
i	160mm Bend/Elbow	210.00	each	2.5463
ii	200mm Bend/Elbow	50.00	each	2.1305
d	Shoe(plain)			
i	160mm Shoe	10.00	each	0.2508
3	Providing and fixing Unplasticised PVC moulded accessories/fittings for Unplasticised PVC rain water pipes to IS: :4985 class 2 for solvent cement joints,having nominal dia. 160 mm.			
	<b>160 MM DIA</b>			
	Socket and spigot bend 45 degree	100.00	each	2.1134

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

## Price Schedule A - Annexure: III

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

Sr. No.	Item Description	Qty.	Unit	% Weightage of item amount against total amount
4	Providing and fixing unplasticised PVC fittings /accessories for unplasticised PVC rain water pipes conforming to IS 13592/1992, type A,(Working pressure-4.0 kg/cm <sup>2</sup> ), for solvent cement joints having nominal diameter 200 mm.			
	<b>200 MM DIA</b>			
	Socket and spigot bend 45 degree	100.00	each	4.5516
	<b>Total :</b>			55.6308
	Total : Annexure-I + Annexure-II + Annexure-III			100.0000

## FACTORY CIVIL CONSTRUCTION &amp; MAINTENANCE DIVISION

**Price Schedule B**

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

1	AC sheets, polycarbonate sheets	}	Free issue from BHEL store
2	Bitumen compound		
3	Red oxide primer.		
4	Structural steel		
6	Synthetic enamel paint		
7	Aluminium paint		
8	PVC pipes and fittings for item no. 5 & 6 of Annx II only.		
9	Galvalume Ridges/ flashings / North Light Curve		
10	Self adhesive SBS (Styrene Butadiene Styrene) modified / bitumen compound		

**SCHEDULE 'C'**

Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.

1	Hire charges.	}	(Subject to availability)
	i) Drill machine @ 252.00/- per day		
	ii) Jack Hammer @108.00/- per day		
2	Drill machine/jack hammer rod Rs. 100.00 per rod		
3	Electricity charges at Rs.66.00/- per M.T. of fabrication of structural steel		

## FACTORY CIVIL CONSTRUCTION & MAINTENANCE DIVISION

### **Terms and Condition**

**Name of work : Repair/replacement of damaged roof/wall sheets, gutters etc. and rain water PVC pipe & specials in various block inside factory area.**

1. Work shall be done as per CPWD Specifications and as per BHEL Special terms and conditions.
2. All the Safety Rules for working at height must be followed including use of PPE's.
3. Dismantled AC/GI/FRP sheets pipes and their accessories shall be deposited at respective Zonal offices of FCX.
4. The contractor shall, upon award of work, inspect roof sheets/ side claddings of various sheds/ manufacturing blocks and carry out repair/ replacement work including gutter cleaning preferably in advance of the rainy season so as to prevent leakage during rain.
- 5. While cleaning the gutter, contractor is supposed to make all the down take pipes/ gutters chock free / obstruction free for smooth evacuation of rain water from roofs/gutters. If during rainy season any chokage is observed in pipe / gutter, the same has to be attended on priority. If chokage problem gets repeated in the same row of gutter /pipe, penalty @ twice the amount of cleaning of gutter between two consecutive rain water downtake pipe of affected area shall be imposed on him. If the problem persists, the work may be got done with risk and cost of the contractor and the amount already paid shall be recovered.**
5. All the workmen engaged must be medically fit for working at height. Certificate to this effect obtained from a registered medical practitioner having a minimum of MBBS degree shall be submitted by the contractor to the department.
7. The subject work as consisted in Annexure I to III may have to be carried out at different sites/locations based on requirement. The maximum time period for completion of work at each site/location shall be fixed in writing in mutual agreement between the Engr-in-Charge and the contractor.