

# TENDER

TENDER NOTIFICATION NO. - **FCX/19201028**

FOR

**Modification of machine foundations and other allied works in various blocks within 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 Two Annexure:

Total price of the package combining **Annexure I & Annexure II** 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** 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****Price Schedule**

Name of work : Modification of machine foundations and other allied works in various blocks within factory area.

**SUMMARY**

	Details ANNEXURE	Total Amount (Rs.)
	Total price of the package combining of <b>Annexure-I &amp; Annexure-II.</b>	

Amount in words: Rs.

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Total price of the package combining of **Annexure-I & Annexure-II** 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** of Price Schedule.

TENDER NOTIFICATION NO. - FCX/19201028  
**FACTORY CIVIL CONSTRUCTION & MAINTENANCE DIVISION**

**Price Schedule : Anneuxre - I**

Name of work : Modification of machine foundations and other allied works in various blocks within factory area.

Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
1		Carriage of material up to 1 km lead by Mechanical transport including, loading, unloading & stacking -1 Km lead			
	1.1.1	a) Lime, Moorum, building rubbish	30.00	cum	0.5783
	1.1.2	b) Earth	50.00	cum	1.2046
	1.1.4	c) Excavated Rock	7.50	cum	0.2891
	1.1.11	d) Steel	1.50	Tonne	0.0257
2		Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m; disposed earth to be levelled and neatly dressed.			
	2.6.1	All kinds of soil.	50.00	cum	1.8823
3		Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50 m and lift up to 1.5 m, disposed earth to be levelled and neatly dressed:			
	2.7.1	a) Ordinary rock.	6.00	cum	0.3453
	2.7.3	b) Hard Rock (blasting prohibited).	1.50	cum	0.2140
4		Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift up to 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.			
	2.8.1	All kinds of soil.	15.00	cum	0.5710
5	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations, etc. in layers not exceeding 20 cm in depth : consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5m	20.00	cum	0.4878
6		Extra for every additional lift of 1.5 m or part thereof in.			
	a) 2.26.1	All kinds of soil.	5.50	cum	0.0554
	b) 2.26.2	Ordinary or hard rock.	1.00	cum	0.0180

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Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
7	**	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:( <b>Cement free issue by the Deptt.</b> )			
a)	4.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size ).	2.00	cum	1.4997
b)	4.1.6	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size ).	2.00	cum	1.4746
8	4.12	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.	15.00	per 50kg cement	0.1349
		Note: - Difference in dosing of water proofing compound as per the manufacturer's recommendation from the one indicated against the item shall not attract any extra claim by the contractor.			
9	**	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.( <b>Cement free issue by the Deptt.</b> )			
	5.1.2	a) 1 : 1.5 : 3 (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size).	20.00	cum	15.6941
	5.1.3	b) 1 : 2 : 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	9.00	cum	7.2460
10		Centering and shuttering including strutting, propping, etc. and removal of form for:			
	5.9.1	a) Foundations, footings, bases of columns, etc. for mass concrete.	30.00	sqm	1.3267
	5.9.2	b) Walls (any thickness) including attached pilasters, butteresses, plinth and string courses, etc.	10.00	sqm	0.7973
	5.9.3	c) Suspended floors, roofs, landings, balconies and access platform.	3.00	sqm	0.2631
	5.9.5	d) Lintels, beams, plinth beams, girders, bressumers and cantilevers.	6.00	sqm	0.4388
	5.9.6	e) Columns, pillars, piers, abutments, posts and struts.	9.00	sqm	0.9155
		<b>(Note :- The contractor is supposed to bring shuttering materials for the work. If due to any urgency ,BHEL shuttering materials are used , deduction @ 50 % of schedule rate of this item.)</b>			

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Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
11	Ana. 5.22A.6	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. <b>(Reinforcement bars will be supplied free of cost from BHEL store).</b>			
		b) Thermo-Mechanically Treated bars.(TMT bars)	1730.00	kg.	3.7260
12	5.28	Providing and fixing in position 12 mm thick bitumen impregnated fibre board conforming to IS : 1838 including cost of primer, sealing compound in expansion joints.	5.50	per cm depth per 100m	0.5892
13	10.1 Ana	Structural steel work in single section fixed with or without connecting plate including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete. <b>(Structural steel &amp; Primer free issue from BHEL stores).</b>	160.00	kg	0.3702
14	10.2 Ana	Structural steel work welded /riveted/ bolted 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. <b>(Structural steel &amp; primer will be issued free of cost from BHEL store)</b>	380.00	kg	1.4433
15	**	12 mm cement plaster of mix:(Cement free issue by the Deptt.)			
	13.4.2	1 : 6 (1 cement : 6 coarse sand) .	15.00	sqm	0.4331
16	**	15 mm cement plaster on the rough side of single or half brick wall of mix: <b>(Cement free issue by the Deptt.)</b>			
	13.5.2	1 : 6 (1 cement : 6 coarse sand).	14.40	sqm	0.4790
17		Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer-in-charge.			
	15.2.1	a) 1:3:6 or richer mix.	4.00	cum	0.7812
	15.2.2	b) 1:4:8 or leaner mix.	4.00	cum	0.4816
18	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.	20.00	cum	5.6984

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**Price Schedule : Anneuxre - I**

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Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
19		Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.			
	15.7.4	In cement mortar.	3.00	cum	0.4947
20		Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge:			
	15.9.2	In cement mortar	3.00	cum	0.5903
21		Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:			
	15.17.2	Channels, angles, tees and flats	120.00	kg	0.0227
22	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.	1200.00	kg	0.3667
23		Dismantling roofing including ridges, hips valleys and gutters, etc., and stacking the material within 50 metres lead of:			
	15.28.1	a) G.S. sheet	15.00	sqm	0.1995
	15.28.2	b) Asbestos sheet	60.00	sqm	0.3772
24	**	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground levels for underground structures as directed by Engineer-in-Charge and consisting of:			
		I) 1st layer of 22 mm to 25 mm thick approved and specified rough stone slab over a 25 mm thick base of cement mortar 1 : 3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS: 2645 in the recommended proportion over the levelling course (levelling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound.			
		II) 2nd layer of 25 mm thick cement mortar 1 : 3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportions.			
		III) Finishing top with stone aggregate of 10 mm to 12 mm nominal size spreading @ 8cudm/sqm thoroughly embedded in the 2nd layer:			
	22.1.1	Using rough kota stone <b>(Cement free issue by Deptt.)</b>	3.60	sqm	0.5162

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Sr. No.	Based on DSR' 2012	Item Description	Qty.	Unit	% Weightage of item amount against total amount
25	**	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement:3 coarse sand) 20mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by engineer -in-charge.			
	22.2.1	Using rough kota stone (Cement free issue by Deptt.)	3.00	sqm	0.5127
		Total:			52.5442

**FACTORY CIVIL CONSTRUCTION & MAINTENANCE DIVISION****Price Schedule : Anneuxre - II**

Name of work : Modification of machine foundations and other allied works in various blocks within factory area.

Sr. No.	Item Description	Qty.	Unit	% Weightage of item amount against total amount
1	Making holes in the existing concrete floor/pedestal through core cutting up to the required depth and as per the instruction of Engineer-in-charge. <b>(All equipment like core cutter etc. to be arranged by the contractor.)</b>			
	Diametre upto 100 mm	6.00	per metre depth	6.7843
2	Brick work with Ghol bricks of class designation 50 and above in foundation and plinth in cement mortar 1:6 (1 cement : 6 coarse sand) : <b>(Cement free issue by the Deptt.)</b>	6.00	cum	11.0398
3	Half brick masonry with Ghol bricks of class designation 50 and above in foundations and plinth in Cement mortar 1 : 4 (1 cement : 4 coarse sand) . <b>(Cement free issue by the Deptt.)</b>	15.00	sqm	4.9660
4	Fabrication & Erection of temporary barricade with structural steel members in single/built up sections , fixing them with non-AC/A.C./G.S. sheets along with all necessary fittings/ fixtures for construction of machine foundation so as to prevent fouling of adjoining / nearby areas with dirt/dust/earth etc., followed by dismantling the above complete including dismantling and stacking within a lead of 50m. (Supply of non-AC/ AC/GS sheets and structural steel free issue by BHEL) <b>(Unit: Peripheral length multiplied by height)</b>	325.00	sqm	18.4054
5	Supplying and filling in plinth with stone dust under floors, including watering, ramming, consolidating and dressing complete.	4.00	cum	0.8998

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Sr. No.	Item Description	Qty.	Unit	% Weightage of item amount against total amount
6	Providing & fastening chemical capsule Anchoring in RCC member using HILTI, FISCHER or equivalent, adhesive capsule & Galvanised anchor rod steel grade 5.8 complete with nuts & washer including drilling holes of required dia & depth using hammer drill etc complete. To arrest dust & dirt generated during drilling operation, vaccum dust collector should be deployed area of operation should be cordon-off by making temporary enclosure for which enclosure material shall be supplied by BHEL free of cost. The rate should be inclusive of all material, labour, tools & tackles etc. complete except specified otherwise. The job is to be carried out by a authorized applicator only of the concerned company of which anchors are proposed.			
	M24 x 210 mm	6.00	each	3.0011
7	Fastening mechanical Anchoring in RCC member including drilling holes of required dia & depth using hammer drill etc complete. To arrest dust & dirt generated during drilling operation, vaccum dust collector should be deployed in area of operation or the area of operation should be cordoned-off by making temporary enclosure for which enclosure material shall be supplied by BHEL free of cost. The rate should be inclusive of all , labour, tools & tackles etc. complete unless specified otherwise. <b>(Mechanical anchor shall be supplied by BHEL free of cost )</b>			
	Size 15 mm to 25 mm	6.00	No.	0.1711
8	Grouting below base plate, around foundation bolts, including pockets with GP2 grouting cement from M/S FOSROC / Sikadur grouting cement from M/S SIKA/Dr. fixit Pidigrout 10 M grouting cement from M/S PIDILITE or equivalent including cost of grout ,cleaning, vibrating etc.complete.	0.20	cum	2.1883
	<b>Total :</b>			47.4558
	<b>Total : Annexure-I + Annexure-II.</b>			100.0000
Note.1 . Making of pocket for bolting of machines to foundation shall be under the contractor scope. Material for making of pocket shall be provided/arranged by BHEL				

**FACTORY CIVIL CONSTRUCTION & MAINTENANCE DIVISION**

**Price Schedule B**

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The following material free issue from BHEL stores.

- 1 Cement
- 2 Reinforcement steel
- 3 Red Oxide primer
- 4 Structural steel
- 5 Grouting material
- 6 M S Bar

**Price Schedule C**

Name of work : Modification of machine foundations and other allied works in various blocks within factory area.

- 1 Hire charges.
    - 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
- } (Subject to availability)