

# **Bharat Heavy Electricals Limited**

**High Pressure Boiler Plant  
Tiruchirappalli – 620 014. India  
Civil Engineering Department (Factory)**

## **TENDER DOCUMENT (PRICE BID)**

**Name of work** : Rehabilitation of Corrosion affected concrete and steel structures on the south & west sides and sedimentation tank areas of Pickling Plant at SSTP, BHEL, Trichy.

**Value of work** : Rs. 34.14 Lakh

**Tender Notice No.** : 02/14-15

**Tender Schedule No.** : 03/14-15

**Period of Contract** : Six (6) Months

**Issued to** :

**BHARAT HEAVY ELECTRICALS LIMITED  
TIRUCHIRAPPALLI – 14**

**BILL OF QUANTITIES**

**NAME OF WORK: Rehabilitation of Corrosion affected concrete and steel structures on the South & West sides and sedimentation tank areas of Pickling Plant at SSTP, BHEL, Trichy.**

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
		<b>PART - A</b>			
1		Surface preparation by chipping the loose concrete, scrapping and removing the same to leave a gap of 20-25mm behind the reinforcements until a sound concrete substrata free of laitance, glaze efflorescence and incompatible concrete is reached. The concrete should be preferably cut with a diamond tipped wheel saw along the perimeter of the repair area to a minimum depth of 10mm. The concrete shall then be broken out with a light mechanical hammer or chisel. Special care shall be taken in breaking out the render in order to prevent de-lamination of the adjacent render etc; as per the instructions of Engineer-in-charge. Removing loose rust if any on the re-bars to be done by wire brushing and sand blasting. To remove the rust effectively two applications of suitable rust remover should be used. Finally, cleaning the entire concrete and rebar surfaces with a jet of water under pressures to remove the entire dust. Then applying appropriate primer to reinforcement rods before doing anti- corrosive treatment. This item of work will be ensured after conducting phenothelene field test at contractor's cost. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.			
a	200.00	In super structure of elevation from -2.5mtr to +6.0mtr.		Sqm	

CONTRACTOR

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
b	200.00	In super structure of elevation from+6.0mtr to+12.0mtr.		Sqm	
c	100.00	In super structure of elevation from+12.0mtr to+18.0mtr.		Sqm	
2		Providing of additional steel reinforcement for jacketing: Adequate tension lap length shall be provided as per the direction of Engineer-in-charge wherever necessary either by welding or by tying if tension lap length cannot be developed due to localized constraints, drilling to be done to approx. 12mm dia.(hole) and 50mm deep at required intervals. Steel bolts or rods of 10mm dia and 100mm length are to be inserted in these holes leaving 50mm bolt or rod above the old concrete. Anchoring shall be done using epoxy resin based on structural adhesive to bond steel to concrete. It should have a compressive strength not less than grade M35 concrete and in a tensile pull out test of the reinforcing steel from the concrete, the material should not fail before the concrete of grade M35. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete. MS/CTD bars will be supplied by BHEL at stores at free of cost.			
a		In super structure of elevation -2.5m to +6.0m			
i	50.00	Columns		Kg.	
ii	50.00	Tie beams		Kg.	

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ACCEPTING OFFICER

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
iii	50.00	Slabs		Kg	
iv	250.00	Walls		Kg	
b		In super structure of elevation+6.0m to +12.0m			
I	50.00	Columns		Kg.	
ii	50.00	Tie beams		Kg.	
3		Providing the following type of meshes , suitable to site condition as per the instructions of Engineer-in-charge. For RCC columns, beams, slabs, rainwater gutters, parapet walls, etc., after preparing the surfaces by suitable binding method. The elevation of work is from -2.5m to +18.0m. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.			
a	150.00	Using GI chicken mesh of std. gauge		Sqm	
b	50.00	Using GI weld mesh of std. gauge		Sqm	

CONTRACTOR

4

ACCEPTING OFFICER

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
4		Drilling of holes of size 10/12mm dia, to a depth of 30 to 50mm into the concrete using rotary cum hammer drill and fixing PVC/brass nozzles with epoxy/polymer sealant to facilitates grouting. The spacing of the nozzles shall be decided by the Engineer-in-charge and as per site condition. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.			
a	500.00	In super structure of elevation -2.5m to +6.0m		No	
b	100.00	In super structure of elevation+6.0m to +12.0m		No	
c	50.00	In super structure of elevation+12.0m to +18.0m		No	
5		Supplying and application of high strength epoxy based polymer or equivalent sealant to seal voids and cracks of any kind over concrete surfaces of columns , tie beams, crane girders, slabs, walls, louvers, etc., as per the instructions of Engineer-in-charge. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.			
a	100.00	In super structure of elevation -2.5m to +6.0m		Kg	

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ACCEPTING OFFICER

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
b	100.00	In super structure of elevation+6.0m to +12.0m		Kg	
c	25.00	In super structure of elevation+12.0m to +18.0m		Kg	
6		<p>Providing Benzyle peroxy cured monomer or equivalent to seal voids and cracks over the concrete surface by grouting / injecting through the nozzles to strengthen the weak concrete. The system should have very low viscosity of 5 cps , which will enable it to soak into weak concrete and on subsequent polymerization bind the loose and weak concrete. The grouting /injecting pressure should be 1 to 3 kg./sq.cm. The monomer has to be allowed to cure for atleast 24 hrs. before use as per the instruction of Engineer-in-charge. Minimum requirements of epoxy based grout materials are to be-</p> <p>i) Compressive strength at 7 days-60N/mm<sup>2</sup> Rate includes cost of all material and labour etc., complete.  ii) Tensile strength : 30 to 45 N/mm<sup>2</sup>  iii) POT life : 20 to 30 minutes  iv) Elongation at breach : 1%  v) Shrinkage co-efficient in cure : 0.005</p> <p>Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.</p>			
a	50.00	In super structure of elevation -2.5m to +6.0m		Litre	
b	25.00	In super structure of elevation+6.0m to +12.0m		Litre	

CONTRACTOR

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ACCEPTING OFFICER

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
c	5.00	In super structure of elevation+12.0m to +18.0m		Litre	
7		<p>Supply and application of high strength epoxy based polymer or equivalent to seal voids and cracks, as per site condition, over the concrete surface by grouting / injecting through the nozzles to strengthen the weak concrete. The system should have suitable viscosity which will enable it to soak into weak concrete and on subsequent polymerization bind the loose and weak concrete. The grouting /injecting pressure should be 6 to 7 kg./sq.cm. as per the instruction of Engineer-in-charge. Minimum requirements of epoxy based grout materials are to be-</p> <p>i) Compressive strength at 7 days-60N/mm<sup>2</sup> Rate includes cost of all material and labour etc., complete.  ii) Tensile strength : 30 to 45 N/mm<sup>2</sup>  iii) POT life : 20 to 30 minutes  iv) Elongation at breach : 1%  v) Shrinkage co-efficient in cure : 0.005  vi) Viscosity at 30°C : 200 to 300 cps</p> <p>Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc., complete.</p>			
a	5.00	In super structure of elevation -2.5m to +6.0m		Litre	
b	10.00	In super structure of elevation+6.0m to +12.0m		Litre	
c	5.00	In super structure of elevation+12.0m to +18.0m		Litre	

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
8		<p>Applying of epoxy resin based bonding system / phenolic bond coat or equivalent over the concrete surface bond layer. The concrete surface shall be thoroughly dry after wetting down to achieve saturation by soaking with water sprays. For wetting period should depend upon the substrata condition but shall be a minimum of 4 hrs. The surface shall then left until the water has to evaporate before applying bond coat. The bond coat shall be applied by brush and worked in to the surface thoroughly. The subsequent repair materials shall be applied while the bond coat is wet or tacky. If the bond coat dries before application of the repair material, the concrete surface shall be scabbled to remove the old bond coat. All rebar coatings inspected and touched up prior to application of the bond coat. Thinners should not be added to the resin mixture. The thickness of coating should be 0.1mm. The epoxy agent shall be scrubbed in to the substrata by a stiff bristled brush.</p> <p>Following are the properties required</p> <p>i. Pot life : 2 to 3 hrs.</p> <p>ii. Curing time: 1 to 2 days</p> <p>iii. Over coating time: 6 to 9 hrs</p> <p>iv. Minimum compressive strength: 35 to 60 N/mm<sup>2</sup></p> <p>v. Direct tensile bond strength: 10 to 20 N/mm<sup>2</sup></p> <p>vi. Shear strength: 15 to 25 N/mm<sup>2</sup></p> <p>Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.</p>			
a	130.00	In super structure of elevation -2.5m to +6.0m		Sqm	
b	130.00	In super structure of elevation+6.0m to +12.0m		Sqm	

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ACCEPTING OFFICER

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
c	50.00	In super structure of elevation+12.0m to +18.0m		Sqm	
9		<p>Providing bond layer using epoxy phenolic mortar or equivalent for the following thickness over concrete surfaces of columns, beams, slabs, girders, etc., as per the instructions of Engineer-in-charge. Rate includes cost of materials, labour, tools &amp; plants, etc., complete. The bonding materials properties are to be as follows:</p> <p>i) Pot life : 2 to 3 hrs.  ii) Curing time: 1 to 2 days  iii) Over coating time: 6 to 9 hrs.  iv) Minimum compressive strength: 35 to 60 N/mm<sup>2</sup>  v) Direct tensile bond strength: 10 to 20 N/mm<sup>2</sup>  vi) Shear strength: 15 to 25 N/mm<sup>2</sup>.</p> <p>Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.</p>			
a		In super structure of elevation -2.5m to +6.0m			
i	50.00	5mm thickness		Kg.	
ii	10.00	10mm thickness		Kg.	
b		In super structure of elevation+6.0m to +12.0m			
i	15.00	5mm thickness		Kg.	

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
ii	5.00	10mm thickness		Kg.	
iii	5.00	15mm thickness		kg	
c		In super structure of elevation+12.0m to +18.0m			
i	5.00	5mm thickness		Kg.	
10		<p>Providing bond layer using epoxy resin based (epoxy-Latex Part-A + Part-B with water) or equivalent over concrete surfaces of columns, beams, slabs, girders, etc. Application of bonding material to concrete surface by brush, roller, broom or spray equipment as per the instructions of Engineer-in-charge. Rate includes cost of materials, labour, tools and plants, etc., complete.</p> <p>Bonding Components:  Cement : Epoxy - Latex Part A : Epoxy - Latex Part B : Water is in the ratio of 2:1:1:1 by weight.  The bonding materials properties are to be as follows:  i) Pot life : 2 to 3 hrs.  ii) Curing time: 1 to 2 days  iii) Over coating time: 6 to 9 hrs.  iv) Minimum compressive strength: 35 to 60 N/mm<sup>2</sup>  v) Direct tensile bond strength: 10 to 20 N/mm<sup>2</sup>  vi) Shear strength: 15 to 25 N/mm<sup>2</sup>.</p> <p>Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete. Cement will be supplied by BHEL at Stores at free of cost.</p>			

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
a	5.00	In super structure of elevation -2.5m to +6.0m		Kg.	
b	5.00	In super structure of elevation+6.0m to +12.0m		Kg.	
c	5.00	In super structure of elevation+12.0m to +18.0m		Kg.	
11		Providing an over layer using SBR based (styrene butaddyne rubber ) polymer modified cementitious mortar to the following thickness to the RCC members. be The overlay mortar shall mixed using equipment of the type approved by the Engineer-in - charge. The dry components shall be added to the mixing liquid and thoroughly mixed to achieve a uniform consistency. The mortar shall then be applied using a trowel and the concrete patch repair mortar compacted using a tamping bar to the satisfaction of the Engineer-in-charge. The mortar shall be applied in layers until the mortar is level with profile of the existing surface. Each layers shall be allowed to cure for a period of atleast 18 hrs. before subsequent layers are to be applied prior to cure. The surface shall be scarified to provide a key for the next layer. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete. Cement will be supplied by BHEL at Stores at free of cost.			
a		In super structure of elevation -2.5m to +6.0m			
i	50.00	5mm thickness		Sqm	

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
ii	10.00	10mm thickness		Sqm	
iii	50.00	15mm thickness		Sqm	
b		In super structure of elevation+6.0m to +12.0m			
i	10.00	5mm thickness		Sqm	
ii	10.00	15mm thickness		Sqm	
c		In super structure of elevation+12.0m to +18.0m			
i	10.00	10mm thickness		Sqm	
12		Providing an over layer using Epoxy - Latex or equivalent polymer modified cementitious mortar to the following thickness to the RCC members. The overlay mortar shall be mixed using equipment of the type approved by the Engineer-in - charge. The dry components, Cement : Dry river sand : Epoxy - Latex : water is in the ratio of 1 : 3 : 0.2 : 0.3 by weight, shall be added to the mixing liquid and thoroughly mixed to achieve a uniform consistency ( mortar mix shall have the mechanical properties of Compressive strength at 7 days : 20 to 30 N/mm <sup>2</sup> , Flexural strength at 7 days : 5 N/mm <sup>2</sup> , Bond strength: 2 to 5 N/mm <sup>2</sup> ) . The mortar shall than the applied using a trowel and the concrete patch repair mortar compacted using a tamping bar to the satisfaction of the Engineer-in-charge. The mortar shall be applied in			

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
		layers until the mortar is level with profile of the existing surface. Each layers shall be allowed to cure for a period of atleast 18 hrs. before subsequent layers are to be applied prior to cure. The surface shall be scarified to provide a key for the next layer. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete. Cement will be supplied by BHEL at Stores at free of cost.			
a		In super structure of elevation -2.5m to +6.0m			
i	15.00	5mm thickness		Sqm	
ii	10.00	10mm thickness		Sqm	
iii	15.00	15mm thickness		Sqm	
b		In super structure of elevation+6.0m to +12.0m			
i	15.00	5mm thickness		Sqm	
ii	10.00	10mm thickness		Sqm	
c		In super structure of elevation+12.0m to +18.0m			

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
i	5.00	5mm thickness		Sqm	
ii	5.00	10mm thickness		Sqm	
13		Providing safe steel scaffolding materials for a height +0.0m to 18.0m level for the repair work on RCC / Steel structural members and Walls as per the instructions of Engineer-in-charge. Payment will be made for the actual scaffolding area (length x height/breadth). Scaffolding work on roof truss and associated steel members which are coming under the height 12.0m to 18.0m shall be carried out as per the instruction of Engineer-in-charge. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.			
a	350.00	For columns, beams and walls etc.		Sqm	
b	50.00	For roof truss, tie beams and purlins etc.		Sqm	
14	50.00	Providing carbon fibre wrapping over the structurally damaged concrete surfaces of roof trusses, purlins, Crane girders, lintels over opening etc. The concrete surface to be wrapped shall be structurally repaired prior to treatment for corrosion induced damage / structural damage by epoxy / monomer grouting and epoxy / polymer modified mortar repair systems. Depressions in the concrete shall be filled by putty. Differences in concrete levels shall not be more than 1mm. Corners shall be rounded with Gold bond 1893 putty with a radius of 25 mm minimum. The wrapping should be in layers as per the site requirements and as per the instructions of Engineer-in-charge. Wrapping system comprising of :		Sqm	

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
		1. Carbon fibre 200-230 GSM (gms / sq.m.) 2. Primer 3. Putty 4. Saturant Characteristics: Fibre Areal Weight (gm/sq.m) = 200, Fibre Density (gm/cum) = 1.80, Design Thickness (mm/ply) = 0.111, Ultimate Elongation (%) = 1.5, Tensile Strength for Design (N/sq.mm) = 4600, Tensile Modulus for Design (N/sq.mm) ASTMD-3039 = $2.59 \times 10^5$ .			
15	50.00	Providing chemical resistant bitumen mastic for the damaged concrete floors as per the detailed specification of CECRI Karaikudi.		Sqm	
16	50.00	Providing protective surface coating over the carbon fibre wrapping areas of roof trusses, purlins, Crane girders, lintels over opening etc. The materials shall be: Primer: Epoxy TiO <sub>2</sub> (50-60 microns) Undercoat : Epoxy TiO <sub>2</sub> - Cr <sub>2</sub> O <sub>3</sub> (100 - 110 microns) Top coat: Aliphatic / Aromatic TiO <sub>2</sub> PU* (30 - 40 microns)		Sqm	
17	350.00	Painting two coats acid resistant chlorinated rubber paint with one priming coat on plastered surfaces to give an even shade including cleaning the surface of all dirt, dust and other foreign matters sand papering and as per std. specifications. Rate includes cost of paint and all materials, labour, tools and plants, safety net, personal protective equipments etc. complete. In superstructure up to 18.00m height above plinth level.		Sqm	

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ACCEPTING OFFICER

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
18		Supplying and applying of highly chemical resistant epoxy phenolic interpenetrating (IPN) coating over the RCC members and brick walls to prevent further corrosion. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete. - Two coats			
a	50.00	In super structure of elevation +2.5m to +6.0m.		Sqm	
b	20.00	In super structure of elevation +6.0m to +12.0m.		Sqm	
c	50.00	In super structure of elevation +12.0m to +18.0m.		Sqm	
19		Providing polyurethane based water proofing system over the cement concrete surface and finishing as per the instructions of Engineer-in-charge. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.			
a	50.00	In super structure of elevation from+6.0mtr to+12.0mtr.		Sqm	
b	5.00	In super structure of elevation from+12.0mtr to+18.0mtr.		Sqm	
20	200.00	Cleaning and scrapping the corroded structural steel surfaces using wire brush / buffing wheel with hand tool and also removing the rust by two applications of approved rust remover and finally saved blasting to remove the rust effectively. After cleaning, apply one coat of polymer primer and two coats of polymer paint as per the instructions of Engineer-in-charge. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc., complete.		Sqm	

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
21		Painting with two coats of acid resistant chlorinated rubber paint with one coat of primer on steel surfaces to give an even shade including cleaning the surface of all dirt, dust and other foreign matters sand papering and as per standard specifications. Rate includes cost of paint and all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.			
a	100.00	In super structure of elevation+0.0m to +6.0m.		Sqm	
b	50.00	In super structure of elevation+6.0m to +12.0m		Sqm	
c	50.00	In super structure of elevation+12.0m to +18.0m. .		Sqm	
22	100.00	Repairing the old affected RCC surfaces by guniting for a thickness of 40mm covered in two layers with cement mortar 1:3 mix of cement and sand by fixing up GI mesh after applying epoxy bond coat as per standard formula including tying/welding CTD rods using binding wires in the deteriorated RCC structure wherever necessary, staging, curing, etc., complete and as directed by the Engineer-in-charge. The rate applicable only for guniting. Other items of work and materials will be paid under relevant items of work. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.		Sqm	
<b>TOTAL FOR PART – A .. .. .</b>					

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Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
<b>PART - B</b>					
23		Dismantling / removing / demolishing as the case may be of the following by manually/mechanical means and carefully stacking the serviceable materials at site of work or conveying and handing over the same at BHEL stores and disposal of unserviceable materials by transporting and dumping in the near by low level areas within a lead of 100 metres. All as per instructions of Engineer-in-charge.			
a)	5.00	RCC or PCC (using jack hammer) for pockets / cable trenches /industrial heavy duty flooring).		Cum	
b)	5.00	Brick work in cement mortar.		Cum	
c)	100.00	RCC louvers / RCC jally.		Sqm	
24		Providing centering and shuttering for columns, tie beams, slabs, walls, staircase , crane girder, rain water gutter, etc., including strutting, assembling, erecting, dismantling and clearing, etc., complete as per the instruction Engineer-in-charge. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.			

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ACCEPTING OFFICER

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
a	25.00	In super structure of elevation from -2.5mtr to +6.0mtr.		Sqm	
b	25.00	In super structure of elevation from+6.0mtr to+12.0mtr.		Sqm	
c	25.00	In super structure of elevation from+12.0mtr to+18.0mtr.		Sqm	
25		Reinforced cement concrete of mix 1:1.5:3 in suspended floors, roof slabs, beams, lintels, landings, balconies, sunshades, etc., in super structure in ground floor using 12mm to 20mm size granite stone jelly including vibration charges curing, etc., complete but excluding cost of form work, fabrication charges for reinforcement. All as per standard specification and instruction of Engineer-in-charge. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete. MS/CTD bars and cement will be supplied by BHEL at stores at free of cost.			
a	5.00	In super structure of elevation from -2.5mtr to +6.0mtr.		Cum	
b	5.00	In super structure of elevation from+6.0mtr to+12.0mtr.		Cum	
c	2.00	In super structure of elevation from+12.0mtr to+18.0mtr.		Cum	

CONTRACTOR

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ACCEPTING OFFICER

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
26		Providing plastering in cement mortar 1:3 of suitable mix proportion over concrete surface of following thickness as per the instructions of Engineer-in-charge. Rate includes cost of all materials, labour, tools and plants, safety net, personal protective equipments etc. complete.			
a		In super structure of elevation -2.5m to +6.0m			
i	50.00	12mm thickness		Sqm	
ii	50.00	15mm thickness		Sqm	
iii	10.00	20mm thickness		Sqm	
b		In super structure of elevation+6.0m to +12.0m			
i	50.00	12mm thickness		Sqm	
ii	50.00	15mm thickness		Sqm	
iii	10.00	20mm thickness		Sqm	

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ACCEPTING OFFICER

Sl. No.	Quantity	Description of work	Rate (both in figures and in words)	Unit	Total Rs. P.
27	5.00	Brick work with F.P.S. bricks (second class ground moulded chamber bricks) for class designation 50/75 in cement mortar 1:5 for superstructure above plinth up to floor three level.		Cum	
28	150.00	Providing, laying and finishing the top of floor with the following best quality slabs of required sizes over a bed of cement slurry @ 4.40 Kg/SQM and a backing layer of cement mortar 1:4, 20 mm (average) thick, finished with flush pointing in white cement using appropriate colour pigment including rubbing and polishing wherever necessary etc. complete, all as per instructions of Engineer in charge and standard specifications. Cuddappah slabs 20 to 25 mm thick single side polished.		Sqm	
NOTE	1	Quantities are provisional (tentative) only and the same may get vary as per the actual site condition during execution, since it is a rehabilitation nature work.			
	2	Corporate guarantee shall be given by the contractor upto 10 years .			
<b>TOTAL FOR PART – B .. ..</b>					_____
<b>TOTAL FOR PART – A .. ..</b>					_____
<b>SERVICE TAX @ _____</b>					_____
<b>GRAND TOTAL .. ..</b>					_____
<b>(RUPEES .....</b>					<b>ONLY)</b>

CONTRACTOR

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ACCEPTING OFFICER