



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

SCHEDULE- A

Tender Notice No:

HY/FCD/OT-04/2011-12, Dt:- 20.05.2011

PRICE BID

Item no : 1

Name of work: Water Proofing works to arrest roof leakages for buildings in Factory & Admn. Building.

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
1	<p>Surface preparation:- Providing and cleaning the surface to make it free from all the loose mortar, dust, and other contaminants and protrusions which may damage the membrane, followed by water wash as directed by Engineer in charge.</p> <p>Corner Treatment:- Providing and installing a corner treatment using polyester non woven glass filament reinforced on a coat of ARDX WPM 002 a highly flexible, acrylic co polymer based synthetic micro fibre reinforced, heavy duty waterproofing membrane over a primed surface of WPM 265, etc complete as per the ARDEX ENDURA technical specifications and directed by engineer in charge.</p> <p>Cracks/Construction Joints: Providing and treating cracks/construction joints by making a groove of 6mmX6mm, filling the joints with polyurathane or acrylic based sealant, reinforcing the joint using ARDEX Deck web a polyester non woven glass filament reinforced felt, sand witted between two coats WPM 002 highly flexible, acrylic co polymer based synthetic micro fibre reinforced, heavy duty waterproofing membrane over a primed surface of WPM 265 etc complete as per the ARDEX ENDURA technical specifications and as directed by engineer in charge.</p> <p>Primer: Providing and applying WPM 300 two component water based epoxy polyamide membrane primer in one coat at coverage of 60 Sqm per kid to all the surfaces where waterproofing membrane is to be installed etc complete as per the ARDEX ENDURA technical specification and as directed by engineer in charge.</p> <p>Waterproofing Membrane: Providing and installing a premium type waterproofing using WPM 350 a highly flexible liquid applied membrane, heavy duty waterproofing membrane in two coats at coverage of 26 sqm per kit etc complete as per the ARDEX ENDURA technical specification and as directed by engineer in charge. Membrane shall confirm to: Elongation at break 333%, tensile strength 2.9 MPa. After applying primer 1 st coat of wpm 350 coated and lay deckweb and apply the second coat after 24 hours.</p> <p>Note: Any electrical cable, AC points/cables, water lines/points, net cables, drainage pipe lines existing on the walls/ roof surfaces will be removed during execution of work and relayed/refixed properly after completion of the work by the agency. Materials required for relaying the above lines will be issued by BHEL on free of cost at BHEL stores.</p>	50.00	Sq. m.	770.00	38,500.00

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
2	<p>Providing and installing premium type waterproofing using Butynol of 1.2mm thick dark gray colored synthetic rubber with properties which resist, ageing from acid, heat, sunlight and ozone. It has excellent gas impermeability and toughness and remains flexible at low temperatures, including lapping with uncured butyl cold gum tape with 60mm overlapping on all the sides etc complete as per the manufacturer's technical specifications and as directed by Engineer in charge. The membrane shall conform to: Specific Gravity to ASTM D297 1.20±0.05, Hardness IRHD to ASTM D1415 65±5, Tensile Strength to ASTM D412 8.3 MPa min, Modulus at 300% elongation to ASTM D412 4.15 MPa min, Elongation at break to ASTM D412 300% min, Heat Ageing (7 days at 115° C), Tensile Retention to ASTM D412 70% min, Elongation Retention to ASTM D412 70% min, Tear Strength to ASTM D624 26kN/m, Ozone Resistance to ASTM D1149 No visible cracks (7 days at 40°C in 50pphm ozone), Water Absorption to ASTM D471 1.65% (by mass) 0.72% (by volume) Water Permeability to ASTM E96-92, Vapor Flow Resistance (MNs/g) 12414, Vapor Flow Rate (g/m2d) 0.013</p> <p>Note: Interesting comparable figures for water permeability are - Polythene 156, Asphalt 1830, and P.V.C. 4900.</p> <p>K Values on 1mm Butynol sheeting</p> <ul style="list-style-type: none"> o K Value (Thermal Conductivity) 7.4 x 103 Cal/cm/sec/deg C. o Conductivity Data on 1mm Butynol sheeting o Resistance/m2 Ω /m2 = 0.6816 on 9.3 volts. <p>Make:- ARDEX ENDURA</p> <p>Note: Any electrical cable, AC points/cables, water lines/points, net cables, drainage pipe lines existing on the walls/ roof surfaces will be removed during execution of work and relayed/refixed properly after completion of the work by the agency. Materials required for relaying the above lines will be issued by BHEL on free of cost at BHEL stores.</p>	460.00	Sq. m.	2,193.00	10,08,780.00

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
3	<p>PROVIDING POLYTHENE SHEET ABOVE LAY 25-50 MM SCREED(polymer modified mortar in CM 1:3 admixed with WPM 405 highly concentrated, highly advanced polymer at a dosage of 1 litre per bag of cement,) above the old surface.</p> <p>Cove Installation: Providing and installing A 100 mm coving using polymer modified mortar in CM 1:3 admixed with WPM 405 highly concentrated, highly advanced polymer at a dosage of 1 litre per bag of cement, in all the junctions by applying a firm pressure to achieve a good contact between the substrate and the mortar etc complete as per the ARDEX ENDURA technical specifications and as directed by engineer in charge.</p> <p>Corner Treatment: Providing and installing a corner treatment using polyester non woven glass filament reinforced on a coat of ARDX WPM 002 a highly flexible, acrylic co polymer based synthetic micro fibre reinforced, heavy duty waterproofing membrane over a primed surface of WPM 265, etc complete as per the ARDEX ENDURA technical specifications and directed by engineer in charge.</p> <p>Surface Preparation: Providing and cleaning the surface to make it free from all the loose mortar, dust, and other contaminants and protrusions which may damage the membrane, followed by water wash as directed by engineer in charge.</p> <p>Cracks/Construction Joints: Providing and treating cracks/construction joints by making a groove of 6mmX6mm, filling the joints with polyurathane or acrylic based sealant, reinforcing the joint using ARDEX Deck web a polyester non woven glass filament reinforced felt, sand witched between two coats WPM 002 highly flexible, acrylic co polymer based synthetic micro fibre reinforced, heavy duty waterproofing membrane over a primed surface of WPM 265 etc complete as per the ARDEX ENDURA technical specifications and as directed by engineer in charge.</p> <p>Waterproofing Membrane: Providing and installing a premium type waterproofing using WPM 350 a highly flexible liquid applied membrane, heavy duty waterproofing membrane in two coats at coverage of 26 sqm per kit etc complete as per the ARDEX ENDURA technical specification and as directed by engineer in charge. Membrane shall confirm to: Elongation at break 333%, tensile strength 2.9 MPa. After applying primer, 1st coat of WPM 350 coated & deckweb to be laid and 2nd coat of WPM 350 shall be applied after 24 hours. The cost of screed concrete will be paid seperately. Make:- ARDEX ENDURA</p> <p>Note: Any electrical cable, AC points/cables, water lines/points, net cables, drainage pipe lines existing on the walls/ roof surfaces will be removed during execution of work and relayed/refixed properly after completion of the work by the agency. Materials required for relaying the above lines will be issued by BHEL on free of cost at BHEL stores.</p>	503.00	Sq. m.	836.00	4,20,508.00

S No	Description of the item	Qty	Unit	Rate (Rs)	Amount (Rs)
4	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 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size). Note: Any electrical cable, AC points/cables, water lines/points, net cables, drainage pipe lines existing on the walls/ roof surfaces will be removed during execution of work and relayed/refixed properly after completion of the work by the agency. Materials required for relaying the above lines will be issued by BHEL on free of cost at BHEL stores.	25.00	Cu.m	3,257.45	81,436.25
Total Value of work				Total Rs:	15,49,224.25
Total : Rs. Fifteen lakhs forty nine thousand two hundred twenty four only.					

Service Tax:- All taxes inclusive except Service tax as applicable is extra which will be paid by BHEL to the agency after submission of necessary valid documents by the agency.

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