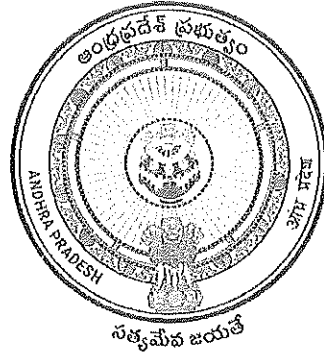


**ANDHRA PRADESH EDUCATION & WELFARE
INFRASTRUCTURE DEVELOPMENT CORPORATION**



AGREEMENT

Name of the work : Providing Terrace /Roof slab water proofing treatment to the Government Schools (Educational Institutions) of Chittoor, Kadapa, Kurnool and Ananthapuram Districts as Package-IV in Andhra Pradesh

Name of the Agency : Berger Paints India Limited,
Berger House, 129 Park Street,
Kolkata - 700017

Estimate Cost: Rs.13.03 Crores

**O/o The Managing Director
APEWIDC, Vaddeswaram (V)
Tadepally (M), Guntur District.**

Bill of Quantities

Schedule-A

Name of the Work: Providing Terrace /Roof slab water proofing treatment to the Government Schools (Educational Institutions) of Chittoor, Kadapa, Kurnool and Ananthapuram Districts as Package-IV in Andhra Pradesh

Sl No	Quantity in Sq M	Description of Item	Rate in Rupees	Unit	Amount in Rupees
1	125000	<p>Providing Terrace/Roof Slab Water Proofing</p> <p>Providing water proofing on Terrace/Roof Slab- the slab strata's whether they are new or old must be sound clean and dry.</p> <p>Cleaning: Cleaning the surface by wire brushing, Hammer Tapping and other mechanical procedures remove laitance, loose flaky particles, loose aggregate, de-bonded mortar, grease or old paint, dust, debris, green vegetation, fungi etc. Clean the surface with water jet and prepare the surface clean for treatment.</p> <p>Crack filling: cut open the cracks in V groove shape and filling the crack Fibre Glass Reinforced PU Hybrid sealant [low modulus silyl terminated polyurethane sealant with Elongation at break: > 350 % (ISO 8339)] a single component, moisture curing.</p> <p>Surface Correction: Providing surface correction rectifying surface undulations/slope corrections, coving in the slab & Parapet wall corners/removing the parapet wall, with Polymer (Latex) modified mortar duly providing water spouts and other arrangements ensuring the perfect water draining out from the Terrace/ Slab surface.</p> <p>Specialized five-layer system of waterproofing treatment to the terrace with Fiber reinforced elastomeric liquid water proofing formulated with hybrid polymers and reinforcing acrylic fibers, 5-layer system.</p> <p>Providing and laying five layers waterproofing cum heat reflective treatment with HYBRID Fiber reinforced elastomeric liquid water proofing</p>	823.55	Sqm	10,29,43,750

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Managing Director,
APEWIDC, Vijayawada

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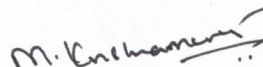
formulated with hybrid polymers and reinforcing acrylic fibers, 5 layer system over the old / new roof slab/ terrace, all as directed by Department Engineer-in-charge with the following specification and should be complain with the following technical parameters for the system - Density: 1.3 Gm/cc, Solids content: 68% ± 2% by weight, Elongation at break ASTM D 638: 200% (for the system), Adhesion to substrate ASTM D 4541: >1.5 N/mm², Water penetration DIN 1048: no leak at 7 bars, Tear resistance ASTM D 1004-76: 17N/mm², Tensile strength ASTM D 412-87:6.0N/mm²

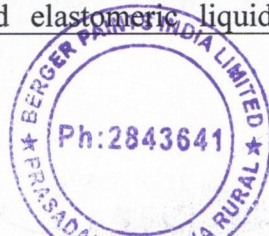
a) First Layer - Supply and Apply penetrative cum bonding primer as base primer cum sealer coat using Nitobond SBR Latex (Fosroc)/ Advanced Latex Plus (Berger)/ Smart repair polymer or multipurpose polymer (Asian) /MIXPRIME AC100 or equivalent modified with water and cement at the ratio 2:1:3 (MIXPRIME AC 100 : water : cement) by volume with a slow speed mixer machine. This compound shall be applied with sufficient thickness to cover the holes/pores/cracks @ 1.000 Liter / SQM (0.350 Lt of Latex Polymer / SQM) and the raw primer should be complain with ASTM 4541 and the Solid content 49% +2%

b) Second Layer – Supply and apply of 2 x 2 mm welded with alkaline resistant coated / non-woven 40 Gsm verging fiber mesh as peer standards for a minimum over lap of 100 mm embedded in the primer coat.

c) Third Layer - Supply and apply of bonding cum water tight acrylic high viscous white primer Nito Prime AW (Fosroc)/ MIXPRIME AC or equivalent @ 0.250 Kg / SQM (dilution or modification not recommended) should be complain with Density: 1.1gm/cc, Solids content: 50 % ± 2% by weight, Elongation at break ASTM D 638: >300%, Adhesion to substrate ASTM D 4541: >1 N/mm², Tensile strength ASTM D 638: >1.5 N/mm², Reduction in chloride ion ingress: 94%@28 days.

d) Fourth Layer – Supply and apply of HYBRID Fiber reinforced elastomeric liquid water proofing


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formulated with hybrid polymers and reinforcing acrylic fibers waterproofing cum weather proof high viscous white liquid membrane Brush Bond Roof Guard (Fosroc)/ Damp Proof (Asian Paints)/ Roof Coat (Berger)/ MIXGUARD HR or equivalent @ 0.500 Kg / SQM (dilution or modification not recommended) should be comply with Density: 1.30 gm/cc , Solids content: 68% ± 2% by weight, Elongation at break ASTM D 638: 400%, Tensile strength ASTM D 412: 1.8N/mm², Adhesion to substrate ASTM D 4541: >1 N/mm², Water penetration DIN 1048: no leak at 7 bars (+ve side), Water vapor transmission ASTM E96: 19g/m²/day, Crack bridging ASTM C836: No cracks up to 2mm thick.

e) Fifth Layer - Supply and apply of fiber reinforced flexible HYBRID Fiber reinforced elastomeric liquid water proofing formulated with hybrid polymers and reinforcing acrylic fibers waterproofing cum heat reflective high viscous white liquid membrane Brush Bond Roof Guard (Fosroc)/ Damp Proof Ultra (Asian Paints)/ Roof Coat (Berger)/ MIXGUARD HRXtra or equivalent @ 0.500 Kg / SQM (dilution or modification not recommended) Density: 1.3 gm/cc.

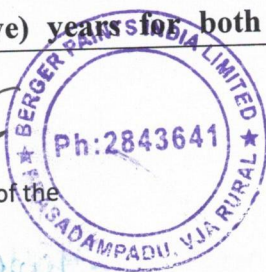
Solids content: 68% ± 2% by weight, Elongation at break ASTM D 638: 200%, Adhesion to substrate ASTM D 4541: >1.3 N/mm², Water penetration DIN 1048: no leak at 7 bars, Tear resistance ASTM D 1004-76: 15N/mm² , Tensile strength ATM D 412-87: 3.0N/mm², Solar reflectance – ASTM G173 – 92 % , Water vapor transmission ASTM E 96 – 19 Kg / M² / day.

Note:

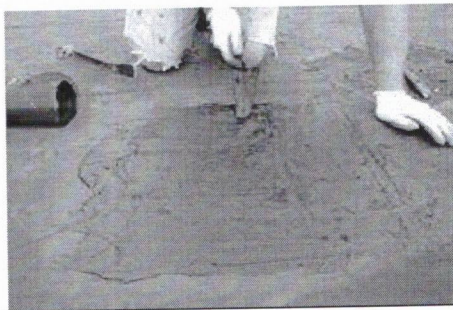
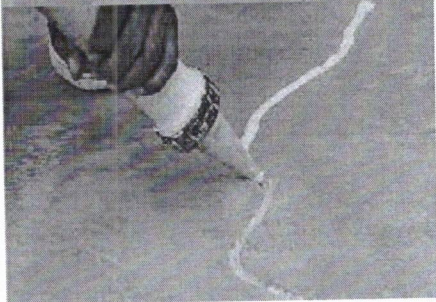
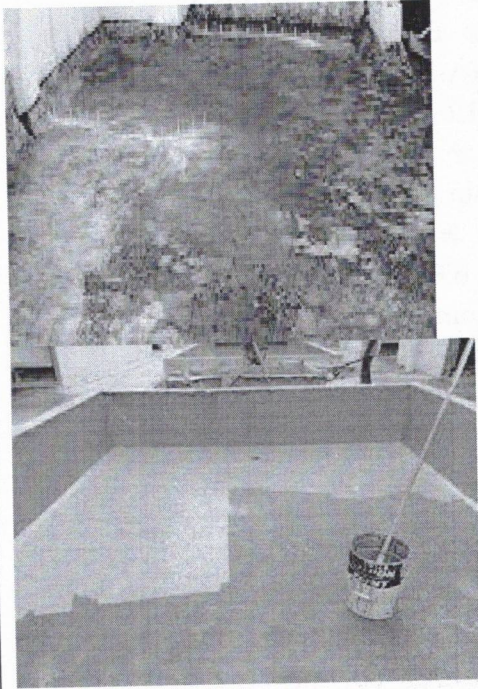
- 1) No dilution or modification recommended for item No.b,c,d and e.
- 2) All materials should be procured/supplied as per the consumption with respect of the work order.
- 3) The application should be carried out by OEM only.

The item shall carry a Warranty period of 5 (Five) years for both material and application

M. Krishnamoorthy
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from the date of work Completion certification.

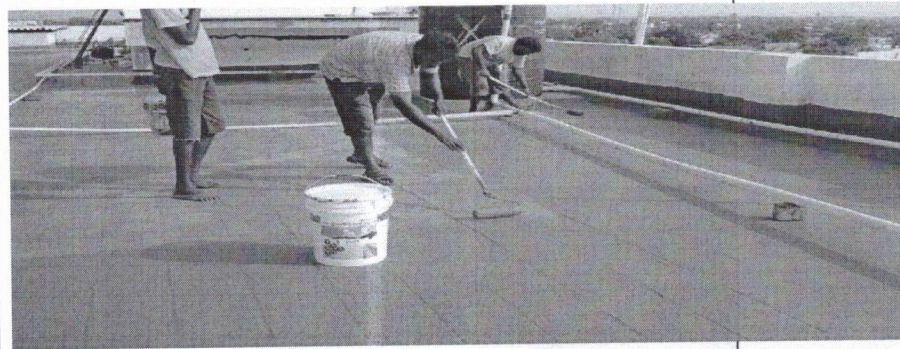
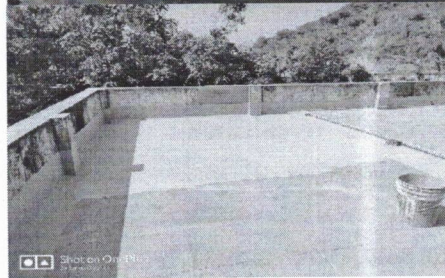
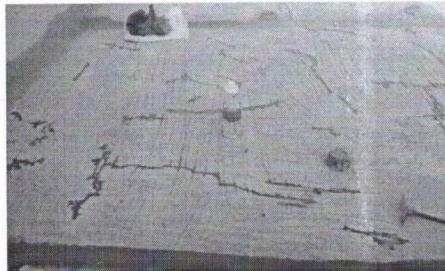


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APEWIDC, Vijayawada

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Providing Ceiling -Treatment of Rusted Steel & Spalled Concrete

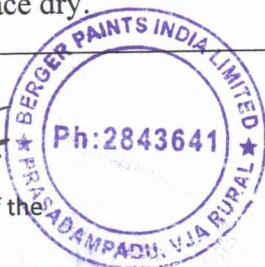
Removing the loose & spalling concrete with mild hammer blows until the inside iron is exposed i.e., about 25 to 40mm depending upon the type of damage and Clean the surface by flushing water and make the surface dry.

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2,50,13,750 ✓

M. Krishnamoorthy
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Firm/Company



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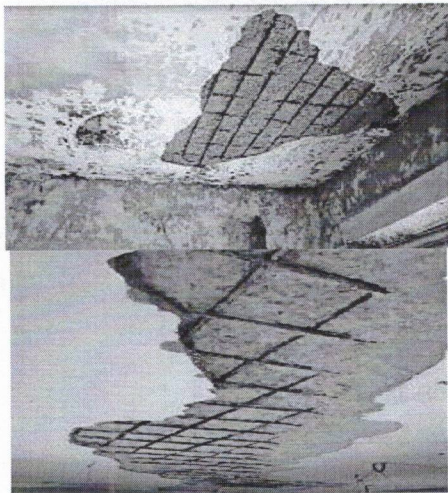
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APEWIDC, Vijayawada

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Applying **RUST REMOVER** (Fosroc, Asian Paints, Berger equivalent Brands) with waste cloth over the exposed surface of reinforcement and leaving it as it is for specified time. Rubbing & cleaning the surface of reinforcement gently with a waste cloth and remove the rusted material.

And applying **RUST REMOVER** Second time and clean the Reinforcement, to ensure the rust of the corroded Reinforcement is completely removed. Providing equivalent **additional reinforcement** on area basis where ever the diameter of rod is reduced due to rusting, and tying up the additional road to the old rod with required development length / overlap. Applying **Zinc Primer** over exposed iron surface with a brush as paint. After 24 hours after application of **Zinc Primer** applying **Epoxy based bonding agent** on the surface of concrete with brush over the exposed. **Applying polymer modified mortar** of in two or three layers depending upon the site conditions and pressing some 12mm size HBG chips into the mortar of each layer at intervals and finishing with neat surface, including Cost & conveyance of all material, all labour charges, all centering & scaffolding charges, including all other incidental charges, including GST and all other taxes etc., complete.

The item shall carry a Warranty period of 5 (Five) years from the date of work Completion certification

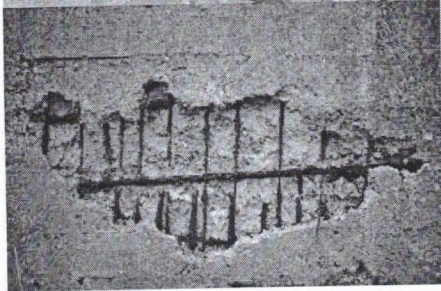
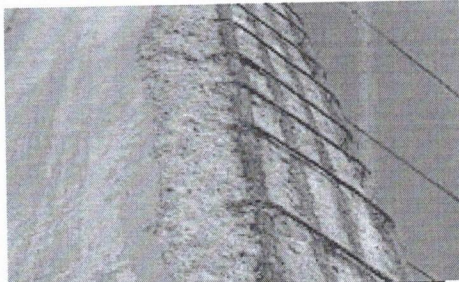
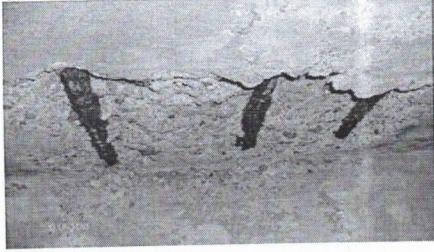
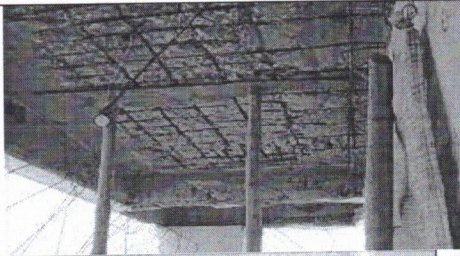


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Managing Director,
APEWIDC, Vijayawada


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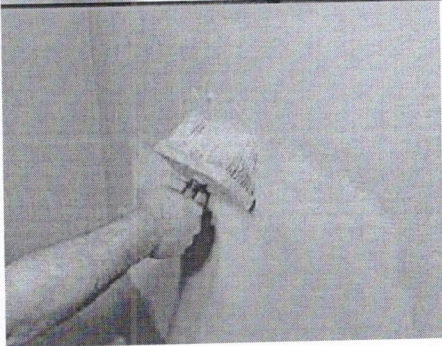
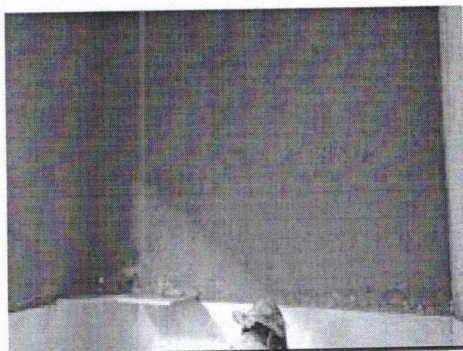
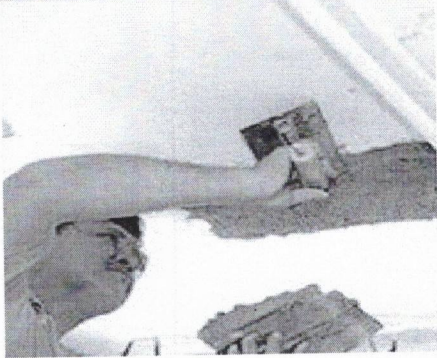
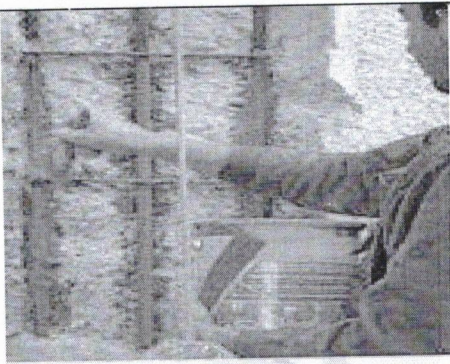


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Managing Director,
APEWIDC, Vijayawada



Grand Total (Including GST and all other Taxes etc.,)

Rs. 12,79,57,500/-

Rupees Twelve Crores Seventy Nine Lakhs Fifty Seven Thousand Five Hundred Only

M. Anshuman
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