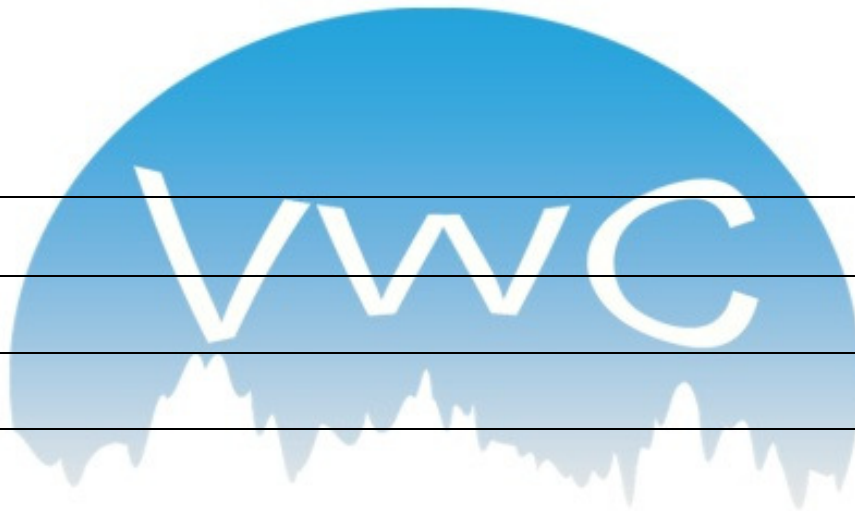


COMPANY PROFILE

Water Proofing Treatment, Concrete Repair & Industrial Flooring

Submitted to: -



From

Vishwas waterproofing & Chemical INC.

Vill – Radawas, Via – Amarsar, The – Shahpura, Distt – Jaipur, (Raj)

Phone No.: - 011 - 64659814, 9891770111, 9999476964.

Authorized Applicator: -

FOSROC CHEMICALS (INDIA) PVT LTD.

www.waterproofingindiasolutions.com

www.vishwaswaterproofing.com



Introduction as a Specialized Contracting agency

Dear Sir,

We are pleased to introduce ourselves as a Professional Water Proofing Company. We have successfully executed various prospects of valuable clients. We are the authorized applicator of **Fosroc Chemicals (I) Pvt. Ltd** the Indian partner of **Fosroc International UK** a truly global force in the field of construction. Our area of specialization in the following types of works which are as under

Water proofing of Basement, Water Proofing of Underground and Overhead Tanks, Bricks Bat Coba at Terrace, Terrace Gardens, Treatment of Sunken Areas such as Toilets, Bathrooms and Kitchens, Hot and Cold insulation of Terrace, Water Body's, Swimming pools and Fountains Repairing and Etc.

Vishwas Waterproofing & Chemicals Inc. is committed to work hand in hand with construction engineer's to provide total solution to construction needs/problem related to water proofing. We start our association right from site verification, Providing product specification and to the execution of work.

In the field of specialized contracts we undertake the projects of Following Nature:

- a. Pre-post Construction of inherent Water Proofing of Tanks reservoir
Damps Basement, Roof and a sunken area, Terrace Gardens.
- b. Grouting of Heavy Machinery.
- c. Silicone Rubber sealing of glass windows, Glazing, Curtain Walls.
- d. Hot and Cold insulation with Thermocol, P. U. Foam, Polyethylene Foam.
- e. Strengthening of Stone Cladding.

We hope that ours above brief profile will be qualify us to work with big and reputed company of yours and will be given a chance to work with you in our Reputed Projects.

Thanking you and assuring you our best of service s and co-operation all the Times.

Yours truly,

For **VISHWAS WATERPROOFING & CHEMICALS INC.**

Reference

| |
|---|
| ➤ Obroi Hotel, Nizamuddin, New Delhi |
| ➤ Taj Palace, Dhola Kuan, New Delhi |
| ➤ Shri Lanka Rest House, New Delhi |
| ➤ Kanishka Hotel, New Delhi |
| ➤ National Museum (Chirag Waterproofing & Coating Ltd.), New Delhi |
| ➤ Parliament House (Chirag Waterproofing & Coating Ltd.), New Delhi |
| ➤ Punjabi Bagh, 47/12, New Delhi |
| ➤ Prashant Vihar, A1/12, New Delhi |
| ➤ Hilton Hotel, New Delhi (Trans World Coating Inc.) |
| ➤ M.E.R.I., Janakpuri, New Delhi |
| ➤ Crown Plaza Surya, New Friends Colony, New Delhi (Trans World Coating Inc.) |
| ➤ B. L. Gupta Construction, New Delhi (Trans World coating Inc.) |
| ➤ Engineers India Limited, New Delhi |
| ➤ Mayur Dhawaj, C.G.H. Society, IP Extn., New Delhi |
| ➤ Bestech India Limited, Gurgaon |
| ➤ Essel Tower, Gurgaon |
| ➤ Inder Construction, Gurgaon |
| ➤ Dodsell Ltd., Manesar (water Tank) |
| ➤ Rashi Apartment, Sector-7, Dwarka, Delhi |
| ➤ Business Park, Gurgaon |
| ➤ M.M.I. School, Sect-40, Gurgaon |
| ➤ D.P.S. School, Sect.-44, Gurgaon |
| ➤ Shapoorji & Pollonji (Trans world Coatings), Sect-44, Gurgaon |
| ➤ Park View, Sohna Road, Gurgaon |
| ➤ Amba Deep Builders, Gurgaon |
| ➤ D.P.S. School, Meerut, U.P. |
| ➤ Sipra Sun City, Noida, U.P. |
| ➤ Omex Construction, Noida, U.P. |
| ➤ K.D. Kheda, U.P. |
| ➤ Green Wood, Greater Noida |
| ➤ E.C.I. , Greater Noida |
| ➤ Metro walk mall, Rohini sec-11. |
| ➤ D.P.S. School, Bhagrota, Jaipur. |
| ➤ The Grand Hotel, Kashmir |
| ➤ Holiday Inn, Manali |
| ➤ Delhi Jal Board, Envirotech Overseas Ltd., U.K. |
| ➤ M/s Stacy Adames, Karol bagh |
| ➤ 125/126, Sushant Lok, Phase-I, Gurgaon |
| ➤ Rapid Metro, |
| ➤ Adani power Rajasthan Limited, Kawai |
| ➤ PNC -TRG (JV) Dhaulpur |
| ➤ Shree Cement Ltd. |

List of Machinery

| SN | Item | Size | Unit | Qty | Purpose |
|-----|---------------------------------|---------|------|-----|-------------------|
| 1. | Injection Grouting Machine | 140 Psi | No. | 10 | Waterproofing |
| 2. | Injection Grouting Machine | 40 Psi | No. | 4 | Waterproofing |
| 3. | Drill Machine | Small | No. | 12 | Waterproofing |
| 4. | Drill Machine | Big | No. | 1 | Re baring |
| 4. | Blower | Small | No. | 4 | Cleaning |
| 5. | Chipper | Small | No. | 12 | Repairing |
| 6. | Chipper | Big | No. | 2 | Repairing |
| 7. | Mixture Machine | Big | No. | 1 | Micro Concreting |
| 7. | Mixture Machine | Manual | No. | 2 | Micro Concreting |
| 8. | Grinding Machine | Big | No. | 8 | Flooring |
| 9. | Grinding Machine | Manual | No. | 5 | Floor Cleaning |
| 10. | Groove Cutting Machine | Big | No. | 2 | Sealant Treatment |
| 11. | Groove Cutting Machine | Medium | No. | 12 | Sealant Treatment |
| 12. | Groove Cutting Machine | Small | No. | 2 | Sealant Treatment |
| 13. | Sealant Filling Gun | Manual | No. | 25 | Sealant Treatment |
| 14. | Blow Lamp | Manual | No. | 5 | Floor Burning |
| 15. | Gas Cylinder with torch | Manual | No. | 5 | Waterproofing |
| 16. | Gunning Machine With compressor | Diesel | No. | 1 | Waterproofing |

List of Employees

| SN | Name | Designation | Responsibilities |
|----|----------------|---------------------|------------------|
| 1 | Ramesh Vishwas | Director | Management |
| 2 | V.K Malhotra | Asst.Director | Management |
| 3 | Amit Sharma | Asst.Director | Management |
| 4 | Sadanand yadav | Manager | Administration |
| 5 | Subhash Sharma | Manager | Administration |
| 6 | Sanjay Joshi | CA | Accounts |
| 7 | Sushila | Manager | Accounts |
| 8 | Pradeep | Manager | Delhi |
| 9 | Satish Kumar | Forman | Delhi |
| 10 | Jagdish | Forman | Delhi |
| 11 | Raja | Forman | Rajasthan |
| 12 | Rahul | Forman | Rajasthan |
| 13 | Amit Thakur | Manager | Haryana |
| 14 | Shyam Kumar | Manager | U P |
| 15 | Rajesh Verma | Manager | Rajasthan |
| 16 | G.L Chauhan | Super visor | Rajasthan |
| 17 | Krishan Kumar | Forman | Rajasthan |
| 18 | Sadanand | Execution In charge | Sealant |
| 19 | Khairatilal | Execution In charge | Epoxy Flooring |
| 20 | Ajeet Singh | Execution In charge | Epoxy Flooring |

SPECIFICATION OF WATER PROOFING TREATMENT

Surface Preparation

Cleaning the surface from dust, mortar splashes, loose material etc. to get a sound concrete surface. Clean the prepared surface with fresh clean water. All inter-sections between roof slab and vertical walls should be provided with minimum 3 inches concave coving. The coving shall be made of 1:2:4 PCC admixed with Conplast WL. Cement slurry admixed with bonding compound shall be used as bonding agent to ensure effective bonding of coving with the roof slab and Vertical wall.

Injection Grouting

Injection grouting shall be done using Non Shrink cement slurry Cebex 100 with plasticizing and expanding grout admixture in 50 kg cement using a standard 40-psi Grout pumps as per the methodology.

1. Drill holes to fix 12mm dia nozzle @ 1.0m c/c. The depth of the hole should be maintained at 50- 75% of the depth of structural member.
2. Holes should be cleansed first with air and then flushed out with water to remove dust, loose particles etc.
3. The nozzles shall be fixed with high strength, fast setting polyester resin based sealing compound. In case of construction joints, a V groove of size 20mm wide 10mm deep should be cut along the line of joint. The groove should be filled with polyester resin based sealing compound and Nozzles can also be sealed with the same material.
4. Injection grouting shall start after one hour from the time of sealing the nozzles. Injection should be done using a standard injection-grouting pump at a pressure of 40psi. In case of vertical members, the grouting shall Start from the lowest most nozzles and continued until the grout begins to flow out at the next higher nozzles. After injection the first nozzle should be closed off and injection should be continued at the next. Once the injected grout is cured, the nozzle should be cut and flushed with concrete surface. The following grout mix shall be used for grouting.

| | | |
|--------------------------------|---|---------------------|
| Cement | : | 50kg |
| Water proofing compound | : | One Pack |
| Water | : | 22 To 25 Ltr |

Water Proofing Coating

Applying two coats of an acrylic polymer emulsion based elastomeric waterproof coating. Taking care that subsequent coat should be applied when the previous coat is touch dry.

Protective Layer

The water proofing treatment should be carried up to the total height of the vertical wall. The same should be protected using a protective rendering of 1:4 cement sand mortar admixed with Water Proofing Compound. Outlets or rainwater pipes/drainage should be sealed with elastomeric silicon sealant.

WATER PROOFING SPECIFICATION FOR BASEMENT BASE

Application Methodology

Lean Concrete: - All concrete surfaces should be cleaned well to remove loose particles, grit, laitance etc. For Raft the waterproofing shall be applied on a 50-75 mm thick lean concrete.

Leveling Layer: - A leveling layer of 12-15 mm thick cement sand mortar admixed with waterproofing admixture over the lean concrete. Bonding coat slurry shall be provided as bonding to the leveling screed. The applied screed shall be cured for a Period of 3 days.

Waterproof Coating

After the primer dries the surface should be made damp by sprinkling water and shall be coated with three full coats of acrylic polymer emulsion based elastomeric waterproof coating with Fiber mass .

Protective Rendering Coat

The waterproofing shall be protected by 15mm thick 1:4 cement sand mortar admixed with waterproofing compounds. The base slab shall be casted over it.

WATER PROOFING SPECIFICATION FOR BASEMENT WALLS

Option - I

Injection grouting of concrete

All concrete surface should be cleaned well to remove particles, grit, laitance etc.

Drilling & fixing nozzles: - Drilling 50 mm deep holes at a distance of 1 m c/c. (The depth of the hole should be maintained at 50-75 % of the depth of the structural member.). The holes shall be cleaned with water and air to remove dust, loose particles etc. Fixing nozzles of 12mm diameter on the drilled holes using quick setting compound.

Injecting Grouting: - Injecting non-shrink cement slurry at a pressure of 40psi into the fixed nozzles. The cement slurry shall have the following mix proportions.

| | | |
|-------------------------------|---|---------------------|
| Cement | : | 50kg |
| Waterproofing Compound | : | One Pack |
| Water | : | 20-25 liters |

Immediately after grouting the nipples should be plugged with quick setting compound. After curing the nipples should be cut and flushed with the concrete surface.

Water Proof Coating

Outer Walls of the basement shall be waterproofed by applying two coats of acrylic polymer emulsion based elastomeric waterproofing coating with a min time gap of 4-6 hours between first and second coat.

Protective Rendering Coat

A protective layer of 12 mm thick 1:3 cement sand mortar admixed with integral waterproofing compound shall be applied over the final layer of the coating.



Option - II

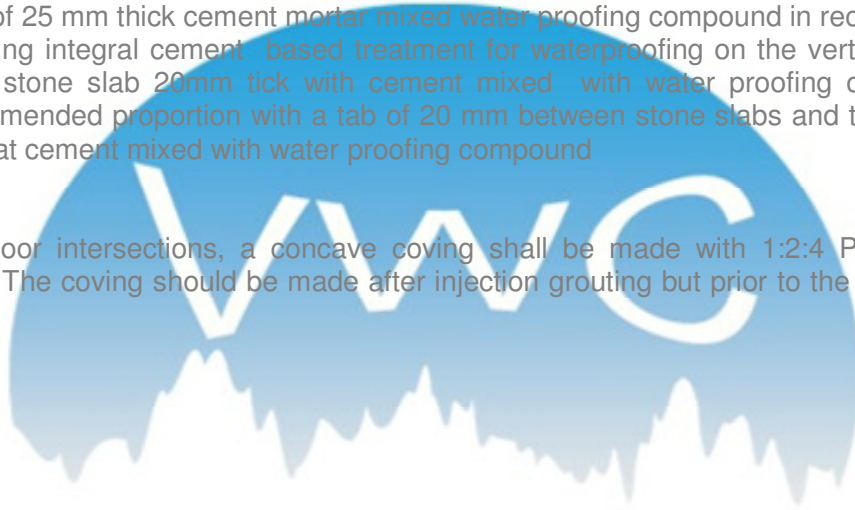
Providing and laying integral cement based treatment for water proofing on horizontal surface at all levels.

1. 1st layer of 20mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar mixed with water proofing compound conforming to is: 2645 in the recommended proportion joint sealed and grouted with cement slurry mixed with water proofing compound recommended by the manufacturer.

2. 2nd layer of 25 mm thick cement mortar mixed water proofing compound in recommended proportions. Providing and laying integral cement based treatment for waterproofing on the vertical surface by fixing the specified stone, stone slab 20mm tick with cement mixed with water proofing compound conforming to IS:2645 in recommended proportion with a tab of 20 mm between stone slabs and the receiving surface and filling the gabs neat cement mixed with water proofing compound

Note: -

At wall to floor intersections, a concave coving shall be made with 1:2:4 PCC admixed with water proofing material. The coving should be made after injection grouting but prior to the application of waterproof coating.



WATER PROOFING SPECIFICATION FOR TOILET AND BALCONY

Surface Preparation

Cleaning the surface from dust, mortar splashes loose materials etc. to get a sound concrete surface. Clean the prepared surface with fresh clean water. All inter-sections between roof slab and vertical walls should be provided with minimum 3 inches concave coving. The coving shall be made of 1:2:4 PCC admixed with integral water proofing compound. Cement slurry admixed with bonding compound shall be used bonding agent to ensure effective bonding of coving with the roof slab and vertical wall. In toilet pipes should be covered with integral water proofing compound. After PCC provide a layer of 1:4 cement sand mortar on wet coat of bonding Compound.

Injecting Grouting of Concrete

All concrete surfaces should be cleaned well to remove loose particles, grit, laitance etc.

Drilling & Fixing nozzles: - Drilling 50mm deep holes at a distance of 1m c/c. (The depth of the hole should be maintained at 50-75 % of the depth of the structural member.) The holes shall be cleaned with water and air to remove dust, loose particles etc. Fixing nozzles of 12mm diameter on the drilled holes using quick setting compound.

Injecting Grouting: - Injecting non-Shrink cement slurry at a pressure of 40psi into the fixed nozzles. The cement slurry shall have the following mix proportions.

| | | |
|-------------------------------|---|---------------------|
| Cement | : | 50kg |
| Waterproofing Compound | : | One Pack |
| Water | : | 20-25 liters |

Immediately after grouting the nipples should be plugged with quick setting compound. After curing the nipples should be cut and flushed with the concrete surface.

Water Proof Coating

After the primer dries the surface should be made damp by sprinkling water and shall be coated with two full coats of acrylic polymer emulsion based elastomeric waterproofing coating with a minimum time gap of 4-6 hours between first and Second coat.

Protective Rendering Coat

The waterproofing treatment shall be protected by 15mm thick 1:4 cement sand mortar admixed with integral waterproofing compound. The base slab shall be casted over it.

WATER PROOFING SPECIFICATION OF TERRACE

Surface Preparation

Cleaning the surface from dust, mortar splashes loose materials etc. to get a sound concrete surface. Clean the prepared surface with fresh clean water. All inter-sections between roof slab and vertical walls should be provided with minimum 3 inches concave coving. The coving shall be made of 1:2:4 PCC admixed with integral waterproofing compound cement slurry admixed with bonding Compound shall be used as a bonding agent to ensure effective bonding of coving with roof slab and vertical wall.

Option-I

Injection Grouting of Concrete

All concrete surfaces should be cleaned well to remove loose particles, grit, laitance etc.

Drilling & Fixing Nozzles: - Drilling 50mm deep holes at a distance of 1 m c/c. (The depth of the hole should be maintained at 50-75% of the depth of the structural member) the hole shall be cleansed with water and air to remove dust and loose particles etc. Fixing nozzles of 12 mm dia meter on the drilled holes using quick setting compound.

Injecting Grouting: - Injecting non-shrink cement slurry at a pressure of 40psi into the fixed nozzles. The cement slurry shall have the following mix proportions.

| | | |
|-------------------------------|---|---------------------|
| Cement | : | 50kg |
| Waterproofing Compound | : | One Pack |
| Water | : | 20-25 liters |

Immediately after grouting the nipples should be plugged with quick setting compound. After curing the nipples should be cut and flushed with the concrete surface.

Water Proof Coating

After the primer dries the surface should be made damp by sprinkling water and shall be coated with three full coats of acrylic emulsion based elastomeric water proofing coating with fibar mass.

Screed

A protection layer of 40 mm thick 1:4 cement sand mortar admixed with integral waterproofing compound shall be applied over the final layer of the coating in two inches coating. Bonding coat of modified slurry should be applied over the application of the screed. The water proofing treatment should be carried upto the total height of the vertical wall. Outlets or rainwater pipes/drainage should be sealed with elastomeric polysulphide sealant



Option-II

Providing and laying integral cement bases water proofing treatment roofs, Balconies, Terrace etc. consisting of following operations.

a. Applying and grouting a slurry coat of neat cement using of admixed with Proprietary water proofing compound conforming to IS.2645 over the RCC slab including cleaning the surface before treatment

b. Laying cement concrete using broken bricks/bricks bats 25 mm to 100 mm size with 50% of cement mortar 1:5 (1 Cement:5 Coarse sand) admixed with water proofing compound conforming to IS : 2645 to required slope and treating similarly the adjoining wall upto 300mm height including rounding of junction of walls and slabs.

c. After days of proper curing slurry admixed compound.

d. Finishing the surface 20 mm thick joint less cement mortar of mix 1:4 (1Cement : 4 Coarse Sand) admixed water proofing compound conforming to with trowel with neat cement slurry and making of 300 x 300 mm square.

e. With average thickness of 120 mm and minimum thickness khurra as 75 mm.

WATER PROOFING SPECIFICATION FOR TERRACE GARDEN

Surface Preparation

Cleaning the surface from dust, mortar splashes loose materials etc. to get a sound concrete surface. Clean the prepared surface with fresh clean water. All inter-sections between roof slab and vertical walls should be provided with minimum 3 inches concave coving. The coving shall be made of 1:2:4 PCC admixed with cement slurry admixed with bonding compound bonding agent to ensure effective bonding of coving with roof slab and verticals wall.

Injection Grouting of concrete

All concrete surfaces should be cleaned well to remove dust particles, grit, laitance etc.

Drilling and fixing nozzles: -Drilling 50mm deep holes at a distance of 1m c/c. (The depth of hole should be maintained at 50-75% of the depth of the structural member.) The holes shall be cleaned with water and air to remove dust, loose particles etc. Fixing nozzles of 12 mm diameter on the drilled holes using quick setting compound.

Injecting Grouting: -Injecting non-shrink cement slurry at a pressure of 40 psi into the fixed nozzles. The cement slurry shall have the following mix proportions.

| | | |
|-------------------------------|---|---------------------|
| Cement | : | 50kg |
| Waterproofing Compound | : | One Pack |
| Water | : | 20-25 liters |

Immediately after grouting the nipples should be plugged with quick setting compound. After curing the nipples should be cut and flushed with the concrete surface.

Waterproof Coating

After the primer dries the surface should be made damp by sprinkling water and shall be coated with two full coats of acrylic emulsion based elastomeric waterproof coating with a min. time gap of 4-6 hours between first and second coat.

Protective cum Leveling Course

The water proofing treatment at roof slab should be protected with 75mm thick M-20 concrete admixed with waterproofing compound. The protective cum leveling course should be laid in desired slope.

Bituminous based thixotropic protective coating

To prevent water proof coating from urea, chlorides, sulphates etc., the plastered surface, which is in direct contact with the soil, should be protected with a fiber reinforced Bituminous based thixotropic protective coating. On a well clean plastered surface provide one full coat of, a penetrative bituminous primer. When the primer gets dry the surface should be coated with two full coats of thixotropic fiber dispersed bituminous protective coating. The non sagging nature of the coating makes it suitable for vertical applications. Time gaps between two coats should be minimum 6-8 hours.

Drainage of water

Provide a bed of 250mm to 300 mm tick 100 mm sized circular drainage gravel. The drainage gravel shall than be fixed with well compacted earth/soil. A filtering medium of galvanized wire should be provided between the bed of drainage gravel and earth.

WATER PROOFING SPECIFICATION FOR WATER TANK

Surface Preparation

Cleaning the surface from dust, mortar splashes loose materials etc. to get a sound concrete surface. Clean the prepared surface with fresh clean water. All inter-sections between roof slabs and vertical walls should be provided with minimum 3 inched concave coving. The shall be made of 1:2:4 PCC admixed with integral waterproofing compound IC. Cement slurry admixed with bonding compound shall be used as abonding agent to ensure effective bonding of coving with roof slab and vertical wall.

Injection Grouting of Concrete

All concrete surfaces should be cleaned well to remove loose particles, grit, laitance etc.

Drilling & Fixing nozzles: -Drilling 50 mm deep holes at a distance of 1 m c/c. (The depth of the hole should be maintained ay 50-75% of the depth of the structural members.) The holes shall be cleaned with water and air to remove dust, loose particle etc. Fixing nozzles of 12mm diameter on the drilled holes using quick setting compound.

Injecting Grouting: -Injecting non-shrink cement slurry at a pressure of 40 psi into the fixed nozzles. The cement slurry shall have the following mix proportions.

| | | |
|-------------------------------|---|---------------------|
| Cement | : | 50kg |
| Waterproofing Compound | : | One Pack |
| Water | : | 20-25 liters |

Immediately after grouting the nipples should be plugged with quick setting compound after curing the nipples should be cut of and flushed with concrete surface.

Option-I Leveling layer and application of waterproof food grade epoxy

A leveling layer of 12-15 mm thick 1:3 cement sand mortar admixed with waterproofing admixture over the lean concrete. Bonding coat of slurry shall be provided as bonding to the leveling screed. The applied screed shall be cured for a period of 3 days. Apply two coats of solvent free epoxy resin coating of 200 microns (dry film thickness) with a min. time gap of 4-6 hours between first and second coat

OR

Option-II Waterproof coating and protective plaster

Apply full three coats of acrylic emulsion based elastomeric waterproof coating with Fiber mass . The waterproofing treatment shall be protected by 15 mm thick 1:4 cement sand mortar admixed with integral water proofing compound .The base slab shall be casted over it.

Note: - In solvent free epoxy resin coating protective plaster is not required and good for drinkable water.

WATER PROOFING SPECIFICATION FOR TERRACE

Surface Preparation:-

Cleaning the surface from dust, mortar splashes loose materials etc. to get a sound concrete surface. Chip off the existing loose mortar splashes from the RCC. Repairing of all cracks and honey combing with polymer cement sand mortar admixed with **Waterproofing compound IS-2645**. Clean the prepared surface with fresh clean water.

Coving:-

All inter-sections between roof slab and vertical walls should be provided with minimum 3 inches concave coving. The coving shall be made of 1:2:4 **PCC** admixed with **Waterproofing compound IS-2645**. Cement slurry admixed with bonding compound shall be used as a bonding agent to ensure effective bonding of coving with roof slab and vertical wall.

High density Acrylic Polystyrene Phalt (APP) treatment:-

Surface prepared of **PCC** slab & vertical walls to remove loose materials, dust etc. cracks, pits, surface undulations etc. The surface should be repaired with 1:4 (cement: coarse sand) mortar admixed with water proofing compound **Waterproofing compound IS-2645** on the bonding compound shall be used as a bonding agent to ensure effective bonding.

Clean the surface to remove laitance, dust, oil etc., shall be cleaned with water jet.

Once the surface becomes dry apply **bitumen Primer** and allow drying until it is tack free prior to the application of the membrane. The **Acrylic Polystyrene Phalt (APP)3P** membrane should be unrolled on the primed surface, heating with gas torch to the bituminous side of the membrane. Taking care that the next roll should be overlapped at least 10 cm to the previous membrane. The joints of the membrane should be heated and pressed properly.

MUD-PASKA TREATMENT

Mud – Phaska:-

Providing and laying a bed mortar of mud soil and compact it with pressing by weighty instrument. Providing and laying mud slurry mixed with Bussan and water. Lay the brick tiles in the slope providing proper slope of at least 3". Taking care that the distance between two tiles should not more than 20 mm, filling the joints with 1:4 (cement: sand) mortar admixed with **Waterproofing compound IS-2645**. Fill the joints with neat cement. Providing and laying proper coving in the corner on the top of treatment admixed with waterproofing admixture **Waterproofing compound IS-2645**.

On Going References

| |
|---|
| |
| ➤ Inter globe business park, Gurgaon. |
| ➤ Adani Power Kabai (Rajasthan) |
| ➤ Infosys, Jaipur. |
| ➤ Bestech city, Dharuhera, Haryana. |
| ➤ Uttam strip, Bhiwadi. |
| ➤ Shree Cement Ltd. |
| ➤ GDCL Beawar |
| ➤ JCR RAS Shree cement plant |
| ➤ J-31-32 Noida sec 63 Romsons |
| ➤ M/S RGI Maditech Pvt Ltd |
| ➤ M/s Romsons Sci & Surg. Ind. Pvt Ltd, U.P |
| ➤ SS Group Gurgaon |
| ➤ B.E. Billimoria and co. Ltd. (Lacknow) |
| ➤ Shree Cement Roorkee (UK) |
| ➤ Mangalam Cement Morak, Kota (Rajasthan) |
| ➤ IOTL Bikaner (Rajasthan) |
| ➤ Shree Vinayak Cement Nimbol (Rajasthan) |
| ➤ Shree Cement Ltd Surat Garh(Rajasthan) |
| ➤ PNC , Dholpur (Rajasthan) |
| ➤ Radisson Blue (Delhi) |
| ➤ IL&FS , Rail, Rapid Metro (Gurgaon) |
| ➤ MBL Infrastructure Ltd Surat garh. (Rajasthan) |
| |
| |

EPOXY PRESSURE GROUTING

Recommended System: Pressure grouting with high strength, epoxy resin grout.

Product Specification: Conbextra EP10 is a solvent free epoxy resin grout designed for grouting of gap widths of 0.25 to 10mm. It is an all liquid system consisting of base and hardener. The components are supplied in the correct mix proportions designed for whole pack mixing on site. Conbextra EP10 gives good general chemical resistance and a 28 day compressive strength of at least 93 N/mm².

System Advantages:

- Excellent durability - high compressive, flexural and tensile strengths ensure a long working life.
- Cost effective - high early strength gain promotes minimum downtime and early commissioning of plant.
- User friendly - simple, full pack mixing to ensure that the performance characteristics are achieved.
- Versatile - suitable for a wide range of loading situations including repetitive dynamic loads.
- Excellent in service performance - non-shrink capability ensures full surface to surface contact.

Application Methodology

Injection Grouting

Injection grouting shall be done using high strength epoxy poly grout **Conbextra EP-10** using a standard 40-psi grout pumps as per the methodology.

1. Drill holes to fix 10mm *dia* Aluminum nozzles. The depth of the hole should be maintained at 50-75% of the depth of structural member.
2. Holes should be cleaned with air and then flushed out with water to remove dust, loose particles etc.
3. The **nozzles** shall be fixed with high strength; fast setting *polyester resin based sealing compound*. In case of construction joints, a V groove of size 20mm wide and 10mm deep should be cut along the line of the joint. The groove should be filled with *polyester resin based sealing compound* and **Nozzles** can also be sealed with the same material.
4. Injection grouting shall start after one hour from the time of sealing the **nozzles**. Injection should be done using a standard *injection-grouting pump* at a pressure of 40 *psi*. Once the injected grout is cured, the **nozzles** should be cut and flushed with concrete surface.

RAPID METRO ON PRESSURE/INJECTION GROUTING OF BEARING PEDESTALS

Rapid Metro Beam is located near Rapid M town of Gurgaon Haryana. Rapid metro was commissioned on 28.09.13 and running at full load as per load demand.

Unit No. 2 is under erection stage. Secondary grouting of unit 2, bearing pedestals were carried out by customer IL&FS from 13.04.13 to 14.04.13 with Conbextra GP-2 after removing the shuttering, gaps were observed below the bearing pedestal as follows:

Bearing pedestal # 1

Average gap noticed below bearing was around 0.2 mm to 2 mm. At some locations air was passing from front side to rear side of pedestal.

Bearing pedestal # 2

Maximum gap below base plate was around 1.7 mm to the depth of more than 300 mm.

Bearing pedestal # 3

Maximum gap below bearing pedestal was around 0.45 mm to the depth of more than 300 mm.

Bearing pedestal # 4

Maximum gap below bearing pedestal was around 1.2 mm and length was around 100 mm.

It was decided jointly by VISHWAS WATERPROOFING & CHEMICAL INC and IL&FS GURGOAN to fill this gap with force/injection grouting. The EPOXY / CONBEXTRA EP-10 was used to fill this gap.

Conbextra EP-10 having the following properties

| | |
|------------------------------|-----------------------------|
| ❖ Density | 1060 Kg/m ³ |
| ❖ Viscosity | 3 poise at 20 Deg. C. |
| ❖ Compressive strength after | 1 day 45 N/mm ² |
| | 3 days 60 N/mm ² |
| | 7 days 80 N/mm ² |

- Low Creep characteristics
- Resistant to repetitive dynamic loads
- Non-shrink and hence ensure complete surface contact and bond.
- High compressive tensile strength.
- The material consists of base and hardener and is pre-weighed from factory as follows.

Conbextra EP-10 Base

745 ml/Tin

Conbextra EP-10 Hardener

255 ml/Bottle

● It has a pot life as follows:

| | | | |
|----------------------------------|----|----|----|
| Temperature in degree centigrade | 10 | 20 | 30 |
| Minutes | 40 | 20 | 10 |

GROUTING PROCEDURE

1. SURFACE PREPARATION

Make proper platform around bearing pedestals for safe working and cleaning the edges. Mark the locations where holes have to be drilled for epoxy injection below pedestals.

2. DRILLING HOLES

Drill holes of 12 mm dia with the help of hammer drill to a depth of 50 mm to 75 mm on sides without shoulder and unto 25 mm below the plates on sides where shoulders are there. A gap or spacing between two holes may be kept around 400 mm.

3. CLEANING

Properly clean the gap below the bearing pedestals/base plate with the help of compressed air.

4. FIXING OF ALUMINIUM NIPPLES

Fix Aluminum nipples into the drilled holes with the help of special mortar Renderoc Plug/Nitocote-VF. These nipples must have stop valve, so that after injecting the epoxy, valves can be closed to stop re-flow of epoxy.

5. SEALING THE EDGES

Make a groove of approximately 10 mm x 5 mm on the side of plates and sealing the same with Nitocote-VF.

6. GROUTING OF CONBEXTRA EP-10

- Allow the nipples and edges to attain strength by waiting for minimum 24 hrs after fixing nipples.
- In summer the ambient temperature reaches around 47°C with low humidity. Hence little care may be taken while grouting, it is advisable to start grouting at about 10.00 AM, (when ambient temperature is lowest), to get maximum pot life of epoxy.



As we know the temperature in TG hall plays an important role on the pot life of Conbextra EP-10. Epoxy tin/bottle kept in ice water to bring down the mixture temperature.

- Avoid contact with skin and eyes. Wear suitable protective clothing, gloves and eyes/face protection. Should accidental skin contact occur, remove immediately with a resin removing cream, followed by soap and water. In case of contact with eyes rinse immediately with plenty of clean water and seek medical attention immediately.
- Open tins of base and hardener one by one as per requirements, and mix it carefully at least for 5 minutes.
- Grouting will be carried out by a manual grout pump (diagram type) with pressure gauges, capable of developing maximum pressure of Approx. 3 Kg/cm².
- Grouting will be done on alternate nipples by normal grout pump until refuse. Then close the nipple stop valve.

7. REMOVAL OF NIPPLE AND FINALLY PLUGGING

Remove the nipples and plugholes with Renderoc Plug/ Nitocote-VF after 24 hrs of grouting process.

FOR

VISHWAS WATERPROOFING & CHEMICAL INC

Ramesh Vishwas

#9891770111

VISHWAS

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Vill-Radawas, Via-Amarsar, The-Shahpura, Distt-Jaipur, (Raj)
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1. Water & Electricity required for the execution of Job shall be provided by you free of cost.
 2. The above charges are inclusive of Labour, material, equipment, loading & unloading of material, conveyance and supervision etc. with *the performance warranty for the period of ten year against any leakage and seepage.*

Mode of payment

25% shall be extra be payable as an advance, 50% payment shall be payable after reaching the material at site and balance payment immediately after completion of the job

Should you require any other information / Clarification regarding This, Please don't hesitate in contacting with us. We shall feel highly obliged to Furnish the same. We hope that you will give us a chance to serve you prove capability.

Thanking you and assuring you the best of our results at all times.

Yours truly,

For **VISHWAS WATERPROOFING & CHEMICALS INC.**

