DR. FIXIT®

FOR HEALTHY CONSTRUCTION

GENERAL REPAIRS & REMEDIAL WATERPROOFING

CRACK REPAIRS

TERRACE WATERPROOFING

EXTERNAL WALLS WATERPROOFING

BATHROOM WATERPROOFING

HEAT RESISTANT COATING FOR TERRACE

GUIDE TO GENERAL REPAIR & REMEDIAL WATERPROOFING

Dr. Fixit, being a pioneer in Waterproofing & Building Repair solutions in India, offers a robust portfolio of repair products which are tailor made to suit various construction applications. We use our proven chemistry, state of the art research capabilities & our experience in the building & construction industry to remain present to the industry's ever-changing trends.

Key highlights of the repair package are:

Pre-packed repair mortars of International Standard - Pagel Systems

- Single component, structural grade repair mortars for low-high build applications
  - 60-65 N/mm^2 – Compressive strength @ 28 days
- Single component, structural grade repair mortars for quick setting applications
  - 9-12 N/mm^2 – Compressive strength at 2 hours
- Micro-fine cement injection grouting systems
  - Fineness of 16000 Blain – Penetrates cracks less than 0.2 mm
- Pre-packed cementitious passivator coating for re-bar corrosion protection

Unique mortar for high-build application – Dr. Fixit Magic Mortar

High build thickness of 20-40 mm in single application

Comprehensive range of Injection Grouting Systems

Polyurethane/ Epoxy/ Siliconate/ Micro-fine cementitious

Protective coatings for critical applications

- Anti-carbonation/ Coal-tar Epoxy/ Elastomeric

To further propagate the message of "Healthy Construction", Pidilite has set up a not-for-profit organisation – Dr. Fixit Institute of Structural Protection and Rehabilitation. DFI regularly organizes Healthy Construction Lecture Series (HCLS) to impart latest knowledge in industry by inviting globally renowned speakers. Journals of international quality; 3R and ReBuild are being published by DFI to spread knowledge and empower the people.

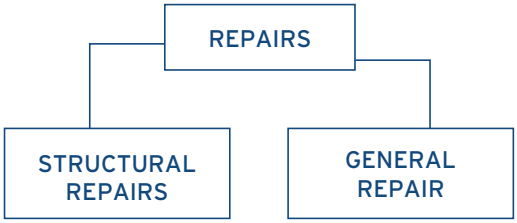
Pidilite has also set up an Advanced Diagnostic Laboratory to service the emerging diagnostic needs of industry professionals. Here, diagnostic & testing facilities such as Corrosion Mapping, Thermo Graphic Imaging, Cover Meter, etc are provided with professional support. In addition to this, Dr. Fixit has set up an Applicator Care Cell and Dr. Fixit Advice Centre, a Toll Free Service to attend to technical on-site queries and recommend the correct solutions to applicators & individuals.

The comprehensive package of Dr. Fixit Structural Repair Systems is discussed in detail in the coming pages.

Repairs

Repairs can be defined as re-instating the structure back in to its existing status by strengthening it to perform for which it is designed for.

Repairs can be further differentiated in to Structural Repair and General Building repair:



Structural repairs are the systems used to strengthen the building to increase its performance life and may be re-instating it into stable condition due to de-stressed happened by various reasons; e.g. Bad Constructions practices, Physical/Mechanical abuses, earthquakes etc.

General Repairs are those adopted to repair small areas e.g. re-surfacing, re-jacketing the RCC members (Non-structural) mainly related to waterproofing needs and can be considered as cosmetic methods to bring the structure back in to good conditions.

The commonly available repair systems are given below:

Corrosion Protection

- Alkaline Micro fine cement slurry as a passivator coat
- Epoxy Zinc Primer

Bonding Agents

Epoxy Bonding Agents

- General Purpose Epoxy Bonding Agents (Low open Time)
- High end Epoxy Bonding Agents (High Open Time and can work in Wet Conditions)

Cement + Polymer modified Slurry

- 2-part site mixed cement slurry
- 1-part ready to use cement slurry

Repair Mortars

- 2-part low to Medium strength repair mortars (generally used for patch repair)
- 2-part High Ultimate Strength Repair mortars (generally used for structural repair)
- Epoxy or Cementitious Repair Mortar
- 1-part Cementitious High Early Strength Repair mortars

High strength mortars

Rapid setting mortars

- Free flow micro-concrete for enhancing the strength of structural members
- Single part high ultimate strength Micro-concrete

Injection Grouts

- Resin (PU & Epoxy)
- Micro fine cement-ready to use
- Cement additive

Protective Coatings

- Acrylic, anti-carbonation coating
- Coal-Tar Epoxy based protective coating

DR. FIXIT REPAIR SYSTEMS

The comprehensive range of Dr. Fixit repair system with its usage areas is explained below:

Products	Areas of application	
CRACKFILLERS		
Dr. Fixit Crack-X Powder **Dr. Fixit Crack-X Paste** **Dr. Fixit Crack-X Shrinkfree** Polymer modified crack fillers	• Plaster or masonry surface cracks <10 mm	
REPAIR MORTAR		
Pagel U10 **Pagel U40** **Pagel U80** **Dr. Fixit Polymer Mortar HB** **Dr. Fixit Polymer Mortar PX** Structural grade cementitious mortar	• Repairs to industrial Floors • Concrete maintenance • Repair of holes edges & cracks • Jointing of masonry, floor & expansion joints	
Pagel R20/20 **Pagel R20/80** Rapid-setting, structural grade mortar	• Repairs to concrete pavements • All concrete repairs with least down-time	
Dr. Fixit Magic Mortar General purpose, high-build repair mortar	• High-build patch repairing in concrete & masonry	
Dr. Fixit Fairing Mortar Cementitious mortar for levelling & fairing	• Levelling & surface finishing in concrete/ plaster • Fairing of pinhole/honeycombs & uneven surface	
Dr. Fixit Repair Mortar High-strength epoxy mortar	• Repairs to industrial concrete floors • Protective lining to exposed concrete • Jointing of expansion/contraction joint	

Products	Areas of application	
BONDING AGENTS		
Dr. Fixit Epoxy Bonding Agent **Dr. Fixit Concrete Super Bond** Epoxy bonding agent	• Bonding primer for old-new concrete applications • Extension or repair of structural concrete	
Dr. Fixit Pidipoxy MI-EP Moisture in-sensitive epoxy boding agent	• Structural or general repairs in marine environment – Ports, jetty's, dry docks, etc. • Bonding primer for damp substrates	
Dr. Fixit Pidicrete MPB **Dr. Fixit Powercrete** Acrylic polymer bonding agent	• Bonding primer for masonry/concrete • Modifying additive for mortars & renders • Mixed with cement slurry for waterproofing use	
Dr. Fixit Pidicrete URP/ **Dr. Fixit Super Latex** SBR polymer bonding agent	• Bonding primer for masonry/concrete • Modifying additive for mortars & renders • Mixed with cement slurry for waterproofing use	
CORROSION PROTECTION SYSTEMS		
Dr. Fixit Epoxy Zinc Primer Epoxy-zinc cathodic protective coating	• Protective coating for re-bars & steel surfaces	
Dr. Fixit Epoxy Zinc Primer Epoxy-zinc cathodic protective coating	• Passivation coating system for steel & other metallic surfaces • Can be applied on damp substrates effectively	

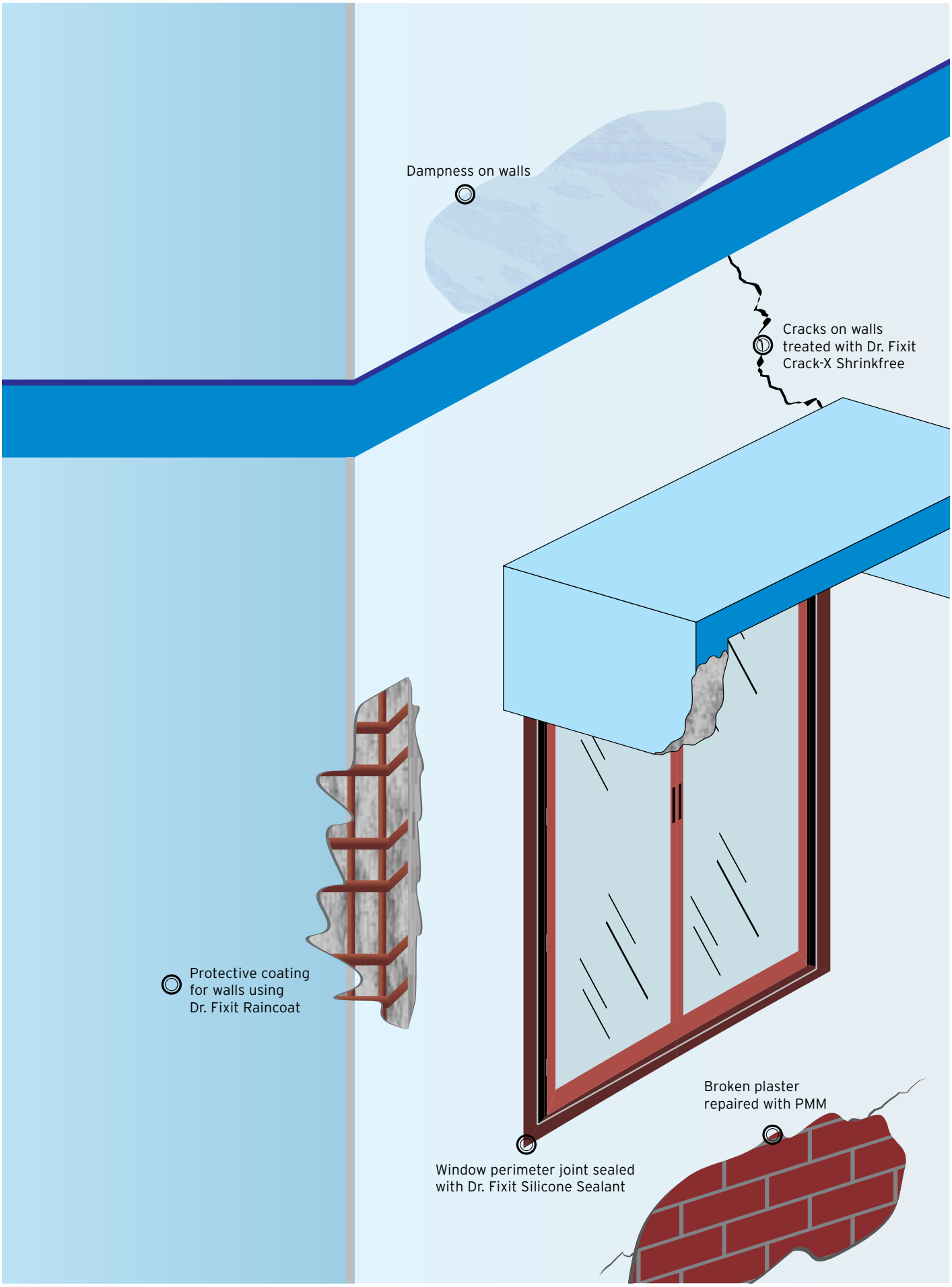
DR. FIXIT REPAIR SYSTEMS

Products	Areas of application	
ANCHORING GROUTS		
Dr. Fixit Anchorfix S/P Polyester-resin anchoring grout	• Fixing of re-bars, tie bars & insert plates • Anchoring of foundation bolts	
Pagel E1F Cementitious anchoring grout	• Fixing of anchoring in concrete/ masonry/ stone	
INJECTION SYSTEMS		
Dr. Fixit PU Foam Injection **Dr. Fixit PU Plain Injection** Polyurethane foam/resin grout	• Water plugging system for drip leakage in: • Defective concrete (cracks/honeycombs) • Concrete joints • Basement waterproofing • Drinking water tanks & reservoirs • Waste water tanks, sewers, manholes • Dams, canals & tunnels • Pipe intrusions & Soil stabilization	
Dr. Fixit Epoxy Injection Grout Epoxy resin grout	• Structural strengthening of weak concrete • Pore/crack sealing in honeycombed concrete	
Dr. Fixit Dampfree Siliconate compound for injection grouting	• Damp-proofing of brick masonry structures	
Pagel ZS10 **Pagel ZL10** Micro-fine cementitious injection grout	• Crack/pore sealing in concrete/masonry/ stone • Structural strengthening of weak concrete • Duct grouting • Rock & soil anchoring • Basement waterproofing • Tunneling, dams & reservoirs • ETP & STP structures	

Products	Areas of application	
INJECTION SYSTEMS		
Dr. Fixit Pidicrete AM Expansive grouting additive	• General purpose cement slurry grouting applications	
PROTECTIVE COATINGS		
Dr. Fixit Coal Tar Epoxy Epoxy-tar based protective coating	• Protective coating for concrete/steel surfaces in: Sewage treatment plants • Splash zones of docks & harbour installations • Silos containing chemicals • Cooling towers • Foundation below ground level • Retaining walls & basements • Effluent treatment plants	
Dr. Fixit Concrete Guard Acrylic anti-carbonation coating	• Anti carbonation cum decorative coating for: · Bridges, flyovers, subways, stadiums · RCC water tanks · Steel structures • All concrete structures exposed to severe atmospheric conditions	
Dr. Fixit Raincoat Acrylic-elastomeric weatherproof coating	• Weather-proof cum decorative coating or: • All exterior concrete/masonry surfaces	
CORROSION PROTECTION SYSTEMS		
Dr. Fixit Instant Leak Plug Fast-setting cementitious compound	• Instant plugging of drip leakage in concrete/ masonry structures	

REMEDIAL TREATMENT TO COMMON PROBLEMS IN A BUILDING

Remedial treatment: external wall dampness



Problem	Surface cracks on plastered walls
Solution	Crack-filling using Dr. Fixit Crack-X Powder/ Dr. Fixit Crack-X Paste/ Dr. Fixit Crack-X Shrinkfree

- Ensure complete surface preparation prior to application
- Chisel the crack to a 'V' groove of 5 mm x 5 mm
- Clean the groove to remove all loose laitance & wash with water
- Apply crack-filler, **Dr. Fixit Crack-X Paste/ Dr. Fixit Crack-X Powder** with a putty blade
- Air cure for 24 hrs prior to over-coating with decorative paint
- Use **Dr. Fixit Crack-X Shrinkfree** for cracks up to 10 mm width

Problem	Broken plaster on masonry walls
Solution	Re-plaster with Polymer Modified Mortar (PMM) using Dr. Fixit Pidicrete URP/ Dr. Fixit Pidicrete MPB/ Dr. Fixit Super Latex

- Chip off the damaged portion to obtain a sound surface with straight edges
- Wash the area with water & apply 1 primer coat of **Dr. Fixit Pidicrete URP**
- Primer mixed in the proportion 1:1 (URP: Cement)
- Prepare PMM using **Dr. Fixit Pidicrete URP** & apply while the primer is tacky
- PMM consists of 1 part cement+3 parts sand+ 15% URP+20% water(% by weight of cement)
- Mixing & application of **Dr. Fixit Pidicrete URP** as prescribed in 'TDS'
- Allow the repaired patch to cure adequately

Problem	Sealing the wall surface with a protective cum decorative coating
Solution	Waterproof coating for external walls using Dr. Fixit Raincoat

- Ensure complete surface preparation prior to application
- Wire brush the surface to remove all the loose laitence & wash with clean water
- Ensure complete crack-filling as recommended & wet the wall prior to over-coating
- Brush apply 1 primer coat of **Dr. Fixit Primeseal** & allow to dry for 4 hrs
- Brush apply 2 coats of **Dr. Fixit Raincoat** in a span of 4 hrs over the primed surface
- Air cure for 7 days prior to complete functional usage
- Mixing & application of **Dr. Fixit** products as prescribed in 'TDS'

Remedial Treatment: Internal wall dampness

Problem	Surface cracks on plastered walls
Solution	Crack-filling using Dr. Fixit Crack-X Powder/ Dr. Fixit Crack-X Paste / Dr. Fixit Crack-X Shrinkfree

- Ensure complete surface preparation prior to application
- Chisel the crack to a 'V' groove of 5 mm x 5 mm
- Clean the groove to remove all loose laitance & wash with water
- Apply crack-filler, **Dr. Fixit Crack-X Paste / Dr. Fixit Crack-X Powder** with a putty blade
- Air cure for 24 hrs prior to over-coating with decorative paint
- Use **Dr. Fixit Crack-X Shrinkfree** for cracks up to 10 mm width

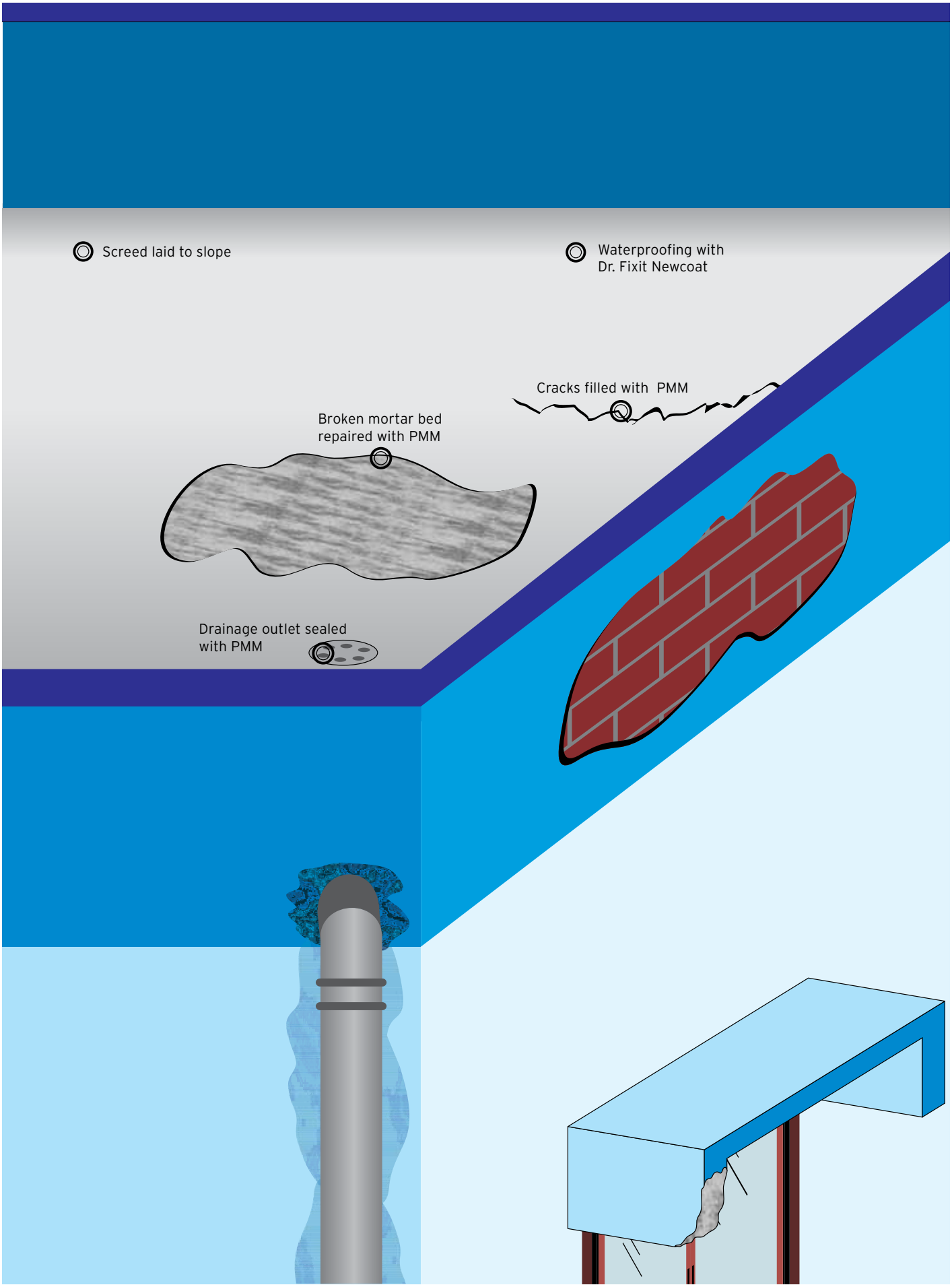
Problem	Broken plaster on masonry walls
Solution	Re-plaster with Polymer Modified Mortar using Dr. Fixit Pidicrete URP / Dr. Fixit Pidicrete MPB / Dr. Fixit Super Latex

- Chip off the damaged portion to obtain a sound surface with straight edges
- Wash the area with water & apply 1 primer coat of **Dr. Fixit Pidicrete URP**
- Primer mixed in the proportion 1:1 (URP: Cement)
- Prepare PMM using **Dr. Fixit Pidicrete URP** & apply while the primer is tacky
- PMM consists of 1 part cement+3 parts sand+ 15% URP + 20% water(% by weight of cement)
- Mixing & application of **Dr. Fixit Pidicrete URP** as prescribed in 'TDS'
- Allow the repaired patch to cure adequately

Problem	Dampness on internal walls
Solution	Damp-proof Coating using Dr. Fixit Dampguard

- Ensure complete surface preparation prior to application
- Wire brush the surface to remove existing paint & putty so as to expose the plastered wall
- Ensure complete crack-filling as recommended & wet the wall prior to over-coating
- Brush apply 2 coats of damp-proof coating **Dr. Fixit Dampguard** over the plastered wall
- Time duration between two coats to be 6 hrs approx.
- Air cure for 24 hrs prior to overcoating with decorative paint

Remedial treatment: Waterproofing of Roof/Terrace



ACCESSIBLE FLAT/SLOPING ROOF

Problem	Broken mortar/ cracks on brick-bat-coba or RCC slab
Solution	Reinstating broken plaster or crack filling with polymer modified mortar using Dr. Fixit Pidicrete URP/ Dr. Fixit Pidicrete MPB/ Dr. Fixit Super Latex

- Chip off the damaged portion to obtain a sound surface with straight edges
- Wash the area with water & apply 1 primer coat of Dr. Fixit Pidicrete URP
- Primer mixed in the proportion 1:1 (URP:Cement)
- Prepare PMM using Dr. Fixit Pidicrete URP & apply while the primer is tacky
- PMM consists of 1 part cement+3 parts sand+ 15% URP+20% water(% by weight of cement)
- Mixing & application of Dr. Fixit Pidicrete URP as prescribed in 'TDS'
- Allow the repaired patch to cure adequately

Problem	Protecting the roof/ terrace with a waterproofing coating
Solution	Providing heavy-duty waterproofing coating using Dr. Fixit Newcoat

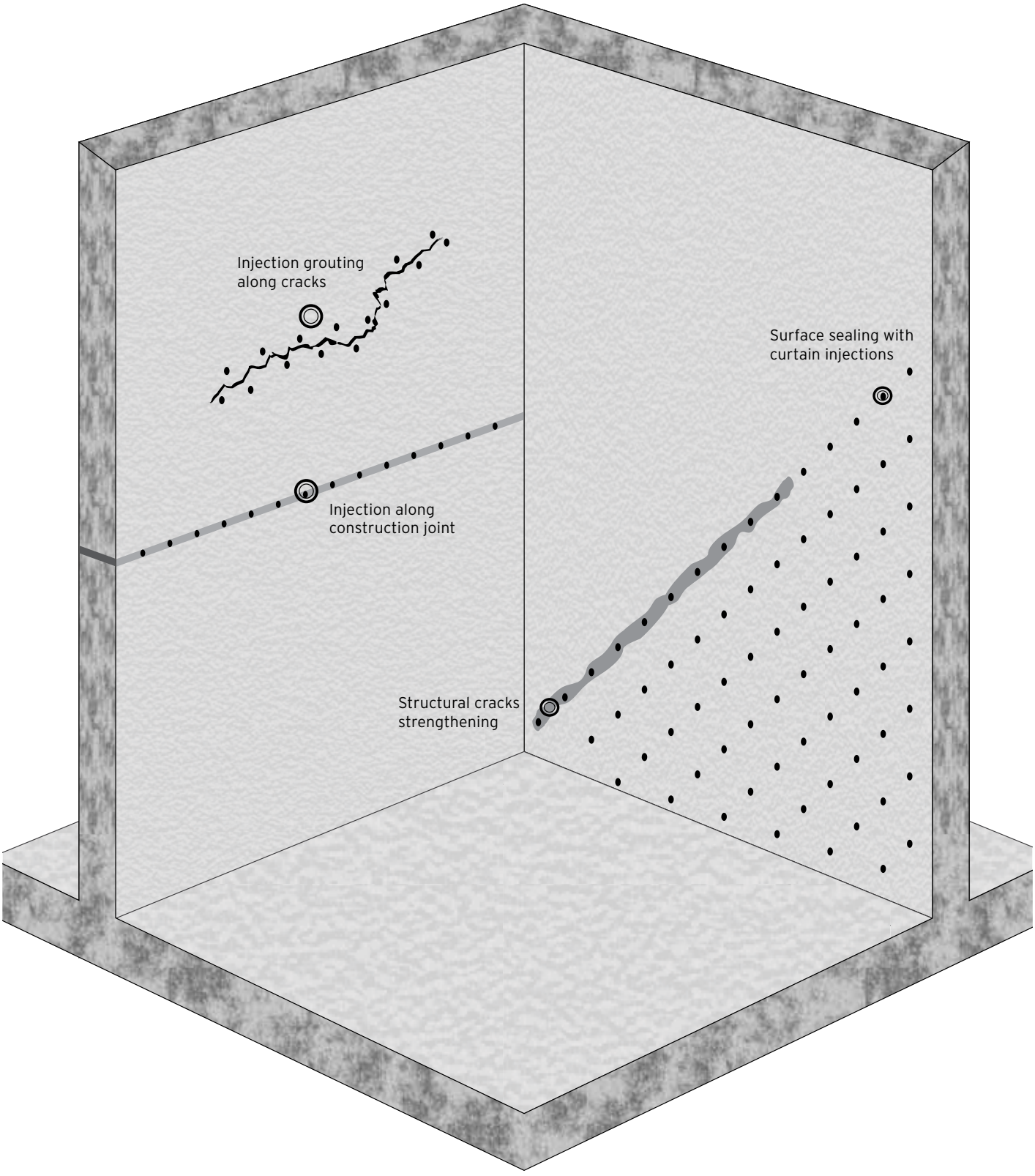
- Ensure complete surface preparation prior to application & maintain a suitable slope for water drainage
- Wire brush the surface to remove loose particles & laitence. Wash with clean water
- Ensure complete crack-filling & reinstate damaged portions with PMM as recommended
- Allow the repaired surface to cure for 24 hrs. Post which wet the surface to a SSD condition
- Brush apply 1 primer coat of Dr. Fixit Primeseal & allow to dry for 4 hours
- Dr. Fixit Primeseal to be diluted with 50% water (%by volume of Dr. Fixit Primeseal)
- Brush apply 1 coat of Dr. Fixit Newcoat over the primed surface
- Overlay a open-woven fiber glass mesh, 40 GSM of size 2 mm x 2 mm while the 1st coat is tacky & allow to dry for 4 hrs
- Apply more 2 coats of Dr. Fixit Newcoat in a span of 4 hrs at right angles to the previous coat
- Air cure for 7 days prior to complete functional usage
- Mixing & application of Dr. Fixit products as prescribed in 'TDS'

IN-ACCESSIBLE FLAT/SLOPING ROOF

Problem	Injection grouting to the roof-ceiling (negative side) for arresting drip leakage using Dr. Fixit PU Foam/Plain Injection
Solution	Damp-proof Coating using Dr. Fixit Dampguard

- Clean the area of leakage to expose the plaster
- Mark points for grouting at the desired location
- Now, drill holes of 12 mm dia at the predetermined points
- Fix PVC/MS nozzles in the grouting holes using a suitable putty & allow to set
- Inject Dr. Fixit PU Foam Injection using a grouting pump
- Follow the process with secondary grouting using Dr. Fixit PU Plain Injection
- Allow to cure for 24 hrs & seal the grouting hole appropriately

Remedial treatment: Basement waterproofing



Problem	Severe drip leakage in basement walls/floor
Solution	Injection grouting for using Dr. Fixit PU Foam/Plain Injection

- Clean the area of leakage to expose the plaster
- Mark points for grouting at the desired location
- Now, drill holes of 12 mm dia at the predetermined points
- Fix PVC/MS nozzles in the grouting holes using a suitable putty & allow to set
- Inject **Dr. Fixit PU Foam Injection** using a grouting pump
- Follow the process with secondary grouting using **Dr. Fixit PU Plain Injection**
- Allow to cure for 24 hrs & seal the grouting hole appropriately

Problem	Severe dampness in basement walls/floor
Solution	Injection grouting using Pagel ZS 10/ZL 10

- Validate the severity of seepage. If the intensity of running water is high & cannot be controlled, then diver the flow of water using a PVC pipe at the spot of leak
- Drill grouting holes at an angle of 45° on the wall adjacent to the area of leakage at a spacing of 500 mm c/c or less in a grid pattern
- Fix PVC or MS nozzles (packers) in the grouting holes **Dr. Fixit Instant Leak Plug** or epoxy putty. Allow the nozzle to set for 24 hrs
- Using a grouting pump, inject pre-packed cementitious grout **Pagel AS10/ ZL10** through the nozzle at required pressure.
- Grouting should commence from the lowest possible level & proceed upwards along the grid with the pumping pressure increased gradually
- Continue pumping until the grout flows out from adjacent nozzle. Detach the pump & nozzle and seal the grouting hole with **Dr. Fixit Instant Leak Plug**.
- Complete grouting of the entire wall in a similar manner

Problem	Sealing the exposed RCC wall/floor surface with a waterproofing coating
Solution	Damp-proofing of wall/floor using Dr. Fixit Krystalline/Dr. Fixit Fastflex

- Ensure complete surface preparation prior to application
- Wire brush the surface to remove existing paint/ putty so as to expose the plastered surface
- Ensure complete crack-filling as recommended & wet the surface prior to over-coating
- Brush apply 2 coats of damp-proof coating **Dr. Fixit Krystalline** over the plastered surface
- Time duration between two coats to be 4 hrs approx
- Air cure for 24 hrs
- In case of large basements 2 coats of **Dr. Fixit Fastflex** may be used to seal the surface

REMEDIAL TREATMENT TO COMMON PROBLEMS IN A BUILDING

Remedial treatment: Rising dampness & efflorescence

Problem	Severe rising dampness at floor level
Solution	Injection Grouting for Rising Dampness using Dr. Fixit Dampfree

- Draw a line along the wall, 300 mm from the ground level & parallel to the window sil
- Mark points for grouting along the wall at a spacing of 300 mm c/c
- Now, drill holes of 12 mm dia at an angle of 45º at the predetermined points
- Fix PVC/MS nozzles in the grouting holes using a suitable putty & allow to set
- Inject **Dr. Fixit Dampfree** using a grouting pump as prescribed in the 'TDS'
- Allow to cure for 24 hrs & seal the grouting hole appropriately

Problem	Mild dampness at floor level on internal side of the wall
Solution	Apply damp-proof coating Dr. Fixit Dampguard

- On the internal side of the wall, ensure complete surface preparation prior to application
- Chip off the plaster in the affected area to expose the masonry
- Wire brush the surface to remove all the loose laitance & wash with clean water
- Blend a putty using **Dr. Fixit Dampguard** & cement in the ratio 1:1:2 (Base: Hardener: Cement) & apply the putty on the masonry surface to level out all the undulations
- Allow the putty to dry for a period of 4-6 hrs
- Now, blend a mixture of Dr. Fixit Dampguard & water in the ratio 1:1:1 (Base: Hardener: Water) & brush apply 2 coats over the leveled surface in a span of 4hrs
- Air cure for 24 hrs prior to re-plastering with polymer modified mortar mixed with **Dr. Fixit Pidicrete URP/ Dr. Fixit Pidicrete MPB**

Problem	Efflorescence/Salt Petre Action on plastered walls
Solution	Cleaning & over coating with Dr. Fixit Primeseal/ Dr. Fixit Dampguard

- On the external side of the wall, ensure complete surface preparation prior to application
- Wire brush the surface to remove all the loose laitence & wash with clean water
- Ensure complete crack-filling as recommended & wet the wall prior to over-coating
- Brush apply 1 primer coat of **Dr. Fixit Primeseal** & allow to dry for 4 hrs
- For internal walls, apply damp proof coating **Dr. Fixit Dampguard**
- Blend a mixture of **Dr. Fixit Dampguard** & water in the ratio 1:1:1 (Base: Hardener: Water) & brush apply 2 coats over the plastered surface in a span of 4 hrs.
- Over-coat the wall with a suitable protective (decorative) coating

Area	Common Visible Problem	Solution	Product Choice
Walls	Severe rising dampness at floor level	Injection grouting at floor level	Dr. Fixit Dampfree
	Damp spots on interior walls	Damp-proof coating on exposed plaster	Dr. Fixit Dampguard
	Cracks on walls (< 5 mm)	Crack filling using shrink-free crack filler	Dr. Fixit Crack-X Paste / Crack-X Powder
	Cracks on walls (< 10 mm)	Crack filling using shrink-free crack filler	Dr. Fixit Crack-X Shrinkfree
	Cracks around door/window frame joints	Crack filling using flexible-acrylic crack filler	Dr. Fixit Gapfill
	Cracks in separation joints of Masonry/RCC	Crack filling using Polymer Modified Mortar	Dr. Fixit Magic Mortar
	Spalling plaster	Re-plaster using Polymer Mortar Additive	Dr. Fixit Pidicrete MPB/URP/Super Latex
	Protective coating for exterior facade	UV resistant, stretchable, weather-proof coating	Dr. Fixit Raincoat
Bathrooms	Dampness on outer face of bathroom wall	Damp-proof coating on exposed plaster	Dr. Fixit Dampguard
	Mild dampness on ceiling	Damp-proof coating on exposed plaster	Dr. Fixit Krystalline
	Drip-leakage from ceiling	Injection grouting for ceiling	Dr. Fixit PU Foam/Plain Injection
	Wearing out of tile joint filler	Re-fill the worn out tile joints with a tile grout	Dr. Fixit Fevimate TG
	Leakage from nahani trap	Re-install using non-shrink grout	Dr. Fixit Pidigrout 10 M
	Sealing of sanitary joint fittings	Joint sealing using flexible-acrylic crack filler	Dr. Fixit Gapfill
	Sealing of drain pipes in walls	Seal the joint with mortar using Polymer Mortar Additive	Dr. Fixit Pidicrete MPB/URP/Super Latex
Roof/ Terrace	Cracks on RCC slab	Crack-filling using Polymer Modified Mortar	Dr. Fixit Pidicrete MPB/URP/Super Latex
	Loose mortar on RCC slab	Re-plaster using Polymer Modified Mortar	Dr. Fixit Pidicrete MPB
	Dripping from ceiling below	Injection grouting for ceiling	Dr. Fixit PU Injection
	Waterproofing of RCC slab (without screed/plaster overlay)	Waterproof coating	Dr. Fixit Newcoat
Basement	Cracks in RCC wall/floor	Crack-filling using Polymer Modified Mortar	Dr. Fixit Magic Mortar
	Loose mortar on RCC slab	Re-plaster using Polymer Modified Mortar	Dr. Fixit Magic Mortar
	Drip leakage on RCC wall/floor	Injection grouting for wall/floor	Dr. Fixit PU Foam/ Plain Injection
	Dampness on RCC wall/floor	Injection grouting for wall/floor	Pagel ZS/ZL10
	Damp-proofing of RCC wall/floor	Damp-proofing using crystalline waterproofing system	Dr. Fixit Krystalline
	Honey-combing in RCC	Injection grouting for wall/floor	Pagel ZS/ZL 10
Structural Repairs (Beam/ column/ slab)	Cracks in RCC wall/floor	Crack-filling using Polymer Modified Mortar	Dr. Fixit Magic Mortar
	Loose mortar on RCC slab	Re-plaster using Polymer Modified Mortar	Dr. Fixit Magic Mortar
	Rusting of steel reinforcement	Epoxy -Zinc protective coating	Dr. Fixit Epoxy Zinc Primer
	Bonding adhesive for reinstating mortar	Epoxy bonding adhesive	Dr. Fixit Epoxy Bonding Agent
	Spalling plaster/cover-concrete	Repair using Polymer Modified Mortar	Dr. Fixit Magic Mortar
	Severely damaged RCC sections	Repair using structural grade high-build PMM	Pagel U 40/U 80
	General purpose patch repairing	Repair using Polymer Modified Mortar	Dr. Fixit Magic Mortar
	Reinstating mortar for jacketing application	Repair using structural grade micro-concrete	Dr. Fixit Micro Concrete
	Pinholes/honeycombs in concrete surface	Level the surface with a fairing putty	Dr. Fixit Fairing Mortar

*PMM – Polymer modified Mortar

APPLICATION METHODOLOGY - REPAIRS USING HAND-APPLIED MORTARS

Equipment

- Slow-speed drill fitted with a paddle
- Gloves
- Painting brush
- Steel trowel

Surface preparation

- Mark the damaged area in a suitable geometric pattern
- Mark the area clearly
- Cut the whole area using a mechanical saw or suitable mechanical means
- Remove all the loose mortar
- Break out more if required to get the sound substrate

Clean the rebar & substrate

- Steel reinforcement must be cleaned thoroughly using mechanical means – Sand blasting/scrubbing
- Alternatively Dr. Fixit Rust Remover may also be used to clean the re-bar of rust
- Ensure the substrate is free of all laitance, oil & loose particles
- Thoroughly soak the substrate with clean water & drain out the excess water

Priming the rebar

- Prime the rebar using Dr. Fixit Epoxy Zinc Primer, cathodic corrosion-protection coating for steel substrate
- Alternatively, prime the rebar using Pagel MS02, cementitious corrosion-protection coating for steel substrates
- Apply 2 coats using a suitable brush to cover the entire rebar

Priming the substrate

- Choice of bonding agent depends on the criticality of repairs.
- For general repairs, Acrylic or SBR based bonding agents may be used i.e. Dr. Fixit Pidicrete MPB/URP. In critical situations epoxy based bonding agents are recommended i.e. Dr. Fixit Epoxy Bonding Agent/ Concrete Super Bond
- Brush-apply the coating uniformly on the entire area
- Ensure the reinstating mortar is applied within the stipulated open time of the bonding agent

Mixing of Repair Mortar

- Choice of repair mortar depends on the nature of application & intended use of the structure
- Repair mortars recommended - Pagel U10/40/80, Pagel R 20/20 or 20/80, Dr. Fixit Magic Mortar, Dr. Fixit Fairing Mortar, Dr. Fixit Polymer Mortar PX & Dr. Fixit Polymer Mortar HB
- Mix the mortar using a slow speed drill fitted with a mixing paddle at the prescribed w/p ratio
- Ensure continuous mixing for 3-5 mins for a uniform consistency

Application

- Ensure the bonding agent is still tacky before commencing the mortar application
- Apply the mortar using a trowel or by hand in the required area
- Ensure the space behind the reinforcement is thoroughly compacted with the mortar
- Gradually build up thickness to complete the entire area

Finishing & curing

- Level & finish the area using a straight edge
- Cure adequately using a suitable curing compound or water in case of hot/humid weather conditions

STRUCTURAL REPAIRS TO RCC MEMBERS USING DR. FIXIT / PAGEL REPAIR SYSTEMS

Break open the loose & damaged concrete

Remove rust scales using a wire brush or suitable mechanical means

Apply a single coat of Dr. Fixit Rust Remover over the cleaned re-bar surface

Wash the re-bar with clean water within 30 minutes & wipe it dry

Apply 2 coats of Dr. Fixit Epoxy Zinc Primer in a span of 4 hours over the treated re-bar & allow to dry for 6 hours

Clean all loose laitence on the concrete substrate & apply 1 coat of Dr. Fixit Epoxy Bonding Agent

Mix Pagel U10/40/80 at water to powder ratio of 0.11-0.13. Trowel/hand apply the mortar on the prepared substrate whilst the bonding agent is still tacky (20-30 mins)

Finish to level & cure adequately

APPLICATION METHODOLOGY - JACKETING/ ENCASEMENT

Equipment

- Slow-speed drill fitted with a paddle
- Gloves
- Water-tight shuttering
- Painting brush
- Steel trowel

Surface preparation

- Mark the damaged area in a suitable geometric pattern
- Mark the area clearly
- Cut the whole area using a mechanical saw or suitable mechanical means
- Remove all the loose mortar

Clean the rebar & substrate

- Steel reinforcement must be cleaned thoroughly using mechanical means – Sand blasting/scrubbing
- Alternatively **Dr. Fixit Rust Remover** may also be used to clean the re-bar of rust
- Ensure the substrate is free of all laitance, oil & loose particles
- Thoroughly soak the substrate with clean water & drain out the excess water

Priming the rebar

- Prime the rebar using **Dr. Fixit Epoxy Zinc Primer**, cathodic corrosion-protection coating for steel substrate
- Alternatively, prime the rebar using **Pagel MS02**, cementitious corrosion-protection coating for steel substrates
- Apply 2 coats using a suitable brush to cover the entire rebar

Priming the substrate

- For Jacketing applications the bonding agent selected should have a high open time which allows the primer to be tacky for a longer duration & permits the erection of formwork
- In such critical situations epoxy based bonding agents are recommended i.e. Dr. Fixit Concrete Super Bond
- Brush-apply the coating uniformly on the entire area
- Ensure the reinstating mortar is applied within the stipulated open time of the bonding agent
- In cases where priming is not possible, pre-soak the substrate completely prior to concreting

Mixing of Repair Mortar

- Mix Dr. Fixit Micro Concrete using a slow speed drill fitted with a mixing paddle at the prescribed w/p ratio
- Ensure continuous mixing for 3-5 mins for a uniform consistency

Erection of Formwork

- Erect formwork ensuring that the unrestrained surface area of the repair is kept to a minimum
- Provide suitable access points to pour or pump the mixed micro-concrete
- The formwork should include drainage outlets for pre-soaking air-venting

Application

- Pour the mortar using a suitable hopper into the water-tight formwork
- Ensure to tamp the formwork from outside occasionally to release the entrapped air
- Gradually complete the pouring till the desired level
- Finishing & curing
- Post de-shuttering, cure adequately using a suitable curing compound or water in case of hot/humid weather conditions

JACKETING OF RCC MEMBERS USING DR. FIXIT MICRO CONCRETE

Break open the loose & damaged concrete

Remove rust scales using a wire brush or suitable mechanical means

Apply a single coat of Dr. Fixit Rust Remover over the cleaned re-bar surface

Wash the re-bar with clean water within 30 minutes & wipe it dry

Apply 2 coats of Dr. Fixit Epoxy Zinc Primer in a span of 4 hours over the treated re-bar & allow to dry for 6 hours

Clean all loose laitence on the concrete substrate & saturate the substrate with water prior to pouring micro-concrete

Erect suitable watertight shuttering around the repair area

Mix Dr. Fixit Micro Concrete at a water to powder ratio of 0.14-0.16 using a slow speed drill & pour it using a hopper whilst the bonding agent is still tacky (4-5 hrs)

Deshutter after 24 hours & cure adequately

APPLICATION METHODOLOGY - PU INJECTION GROUTING

Drill grouting holes on pre-determined spots

- Assess the problem area & suitably mark the spots for drilling grouting holes
- For heavy dripping mark the spots in a grid pattern 150 mm centre-centre or in case of spot dripping drill at the point of leakage
- Initiate drilling for a hole diameter corresponding to the packers in use (generally 16 mm - 20 mm)
- Depth of the hole drilled to be 100 mm deep or generally half the thickness of the substrate
- Fix alloy packers (non-return type) of dimension 14 mm x 80 mm with a suitable putty
- Allow the putty to cure for 24 hrs prior to commencing the injection grouting process

Mixing of components& installing packers

- Mix base & hardener in the specified proportions:
  Dr. Fixit PU Plain Injection - (2 parts of base : 1 part of hardener)
  Dr. Fixit PU Foam Injection - (10 parts of base : 1 part of hardener)
- The mixing to be carried out in a completely dry container using a stirrer
- Complete mixing of both the component packs is advisable
- Mix consistently for 2-3 minutes until a uniform mixture is obtained
- Connect the hose-set (pipe) to the installed packers. Ensure complete contact

Pumping the injection grout

- Rinse the pump using a PU lubricant
- Fill the PU mixture into the pumping container
- Initiate pumping on a low pressure & gradually build up the pumping pressure suitably
- Stop pumping if back pressure is sensed or if the grout has oozed out of the adjoining hole

Activities post injection grouting

- PU foam injection oozes out of the grouting hole & hardens primarily in 10-15 mins
- Complete curing of the PU foam will happen over a period of 24 hrs
- Dr. Fixit PU Plain Injection, resin injection to be pumped once the PU foam has set
- PU plain-resin grout to be injected in a similar manner as that of foam
- This will act as a secondary injection thus completely sealing the leaking cavity
- Cut off the extended portion of the packer & seal the surface with a suitable putty

Cleaning of Equipment & Precautions

- Wash the pump & the hose-set with a PU cleaner post the grouting operation is complete
- Rinse the same with a PU lubricant
- Retain the lubricant in the hose-set & pump until further use
  Following a complete injection of all mechanical packers to refusal and where the visible leakage has been completely eradicated, remove all injection packers. Remove cured material where applicable and fill injection hole with rapid cement.
- Clean all adjacent areas of excess material, powder, cement and/or droppings. Chemicals used for cleaning shall be non-hazardous and non-flammable
- Process grout materials using appropriate protective gear including gloves, masks, or goggles, and appropriate clothing as described and in accordance with the manufacturer's MSDS sheets
- Follow manufacturer's recommendations for product safety and disposal of material

The choice of PU injection grout (foam/resin) will be determined by the severity of leakage. As such Dr. Fixit PU Foam Injection/Dr. Fixit PU Plain Injection may be used suitably

ARRESTING DRIP LEAKAGE USING DR. FIXIT PU FOAM / PLAIN INJECTION GROUT

Identify the area of dripping

Mark the spots for injection grouting. If leakage is through a crack mark grouting points along the crack in a staggered manner. If the leakage is across the area mark grouting spots in a grid pattern

Drill grouting holes so as to neatly fit the injection packers. Drilling to be done at an angle of 45o to the plane of grouting surface

Fix the packers & seal the grouting point using epoxy putty

Use Dr. Fixit PU Foam/Plain Injection, mixed as per the manufacturer's instructions. Inject the mix at a pressure of 3-5 bar

Once the injection grouting process is complete, cut the packer & seal the grouting hole with epoxy putty

Clean the equipment using a PU cleansing compound

BILL OF QUANTITY

BOQ – Repair Mortars

Sr. No.	Specification	UOM	Rate
1.	**Polymer modified mortar for patch reinstatement (low-build)** Providing pre-packed, single component structural grade mortar Pagel U 40 of Pidilite Industries Ltd; the product attains a compressive strength of 25 N/mm^2 in 1 day & ultimate strength of 60 N/mm^2 with a single application built-up 40 mm thick. Water/powder ratio of 0.11-0.12 to be maintained at all times. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to using Pagel U 40	kg	
2.	**Polymer modified mortar for patch reinstatement (high-build)** Providing pre-packed, single component structural grade mortar **Pagel U 80** of Pidilite Industries Ltd; the product attains a compressive strength of 25 N/mm^2 in 1 day & ultimate strength of 60 N/mm^2 with a single application built-up 80 mm thick. Water/powder ratio of 0.11-0.12 to be maintained at all times. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to using **Pagel U 80**	kg	
3.	**Rapid setting repair mortar for patch repair (low-build)** Providing pre-packed, single component structural grade mortar Pagel R20/20 of Pidilite Industries Ltd; the product attains a compressive strength of 10 N/mm^2 in 2 hours, 25 N/mm^2 in 1 day & ultimate strength of 50 N/mm^2 with a single application built-up 40 mm thick. Water/powder ratio of 0.11-0.12 to be maintained at all times. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to using Pagel R20/20	kg	
4	**Rapid setting repair mortar for patch repair (high-build)** Providing pre-packed, single component structural grade mortar Pagel R20/80 of Pidilite Industries Ltd; the product attains a compressive strength of 8 N/mm^2 in 2 hours, 35 N/mm^2 in 3 days & ultimate strength of 65 N/mm^2 with a single application built-up 100 mm thick. Water/powder ratio of 0.11-0.12 to be maintained at all times. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to using Pagel R20/80	kg	
5	**Micro-concrete for jacketing/encasement** Providing pre-packed, single component structural grade micro-concrete **Dr. Fixit Micro Concrete** of Pidilite Industries Ltd; the product attains a compressive strength of 15 N/mm^2 in 24 hours & ultimate strength of 60 N/mm^2. Water/powder ratio of 0.15-0.16 to be maintained at all times. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to using **Dr. Fixit Micro Concrete**	kg	
6	**High-build mortar for general repairs** Providing pre-packed, single component general purpose mortar **Dr. Fixit Magic Mortar** of Pidilite Industries Ltd; the product can be applied to a thickness of 40 mm in a single application without the use of a bonding agent in vertical & overhead situations, when applied on an adequately prepared surface preparation. Water-powder ratio of 0.17-0.20 to be maintained at all times. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to using **Dr. Fixit Magic Mortar**	kg	
7	**High strength epoxy repair mortar** Providing pre-packed, 3 component structural grade epoxy mortar **Dr. Fixit Repair Mortar** of Pidilite Industries Ltd; the product attains a compressive strength of 70 N/mm^2 in 7 days. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to using **Dr. Fixit Repair Mortar**	kg	

BOQ – Bonding Agents			
Sr. No.	Specification	UOM	Rate
1.	Bonding agent for concrete substrate – Epoxy Providing & applying bonding primer coat of **Dr. Fixit Epoxy Bonding Agent** of M/s Pidilite Industries Ltd; epoxy based bonding adhesive for concrete substrates. Application to be carried out using a brush in a single coat over the concrete substrate. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to applying the bonding primer & reinstate mortar whilst the bonding coat is still tacky.	Kg	
2.	Bonding agent for concrete substrate – Polymer modified Providing & applying bonding primer coat of Pagel U10 of M/s Pidilite Industries Ltd; pre-packed, single component, high quality adhesion layer which is polymer modified. Application to be carried out using a brush in a single coat over the concrete substrate. Water/powder ratio to be maintained at 0.11-0.13 at all times. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to applying bonding primer & reinstate mortar whilst the bonding coat is still tacky.	Kg	
3.	Bonding agent for concrete substrate - Acrylic Polymer Providing & applying bonding primer coat of acrylic polymer **Dr. Fixit Pidicrete MPB** of M/s Pidilite Industries Ltd; mixed with cement in the proportion 1:1 by volume. Application to be carried out using a brush in a single coat over the concrete substrate. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to applying the bonding primer & reinstate mortar whilst the bonding coat is still tacky.	Kg	
4	Bonding agent for concrete substrate - SBR Polymer Providing & applying bonding primer coat of acrylic polymer **Dr. Fixit Pidicrete URP** of M/s Pidilite Industries Ltd; mixed with cement in the proportion 1:1 by volume. Application to be carried out using a brush in a single coat over the concrete substrate. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to applying the bonding primer & reinstate mortar whilst the bonding coat is still tacky.	Kg	

BOQ – Protective Coatings

Sr. No.	Specification	UOM	Rate
1.	Corrosion protection to steel substrate – Passivator coating Providing & applying 2 coats of Pagel MS 02 of M/s Pidilite Industries Ltd; pre-packed, single component, high quality mineral-corrosion protection system which is polymer modified. Application to be carried out using a brush in 2 coats over the steel substrate at an interval of 6 hours. Water/powder ratio to be maintained at 0.14-0.18 at all times. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of steel substrate prior to applying Pagel MS 02.	Kg	
2.	Corrosion protection to steel substrate – Cathodic protection Providing 2 coats of a two component zinc-rich anticorrosive primer Dr. Fixit Epoxy Zinc Primer of M/s Pidilite Industries Ltd. Limited giving a dry film thickness of at least 40 μ to the reinforcement bars. Application to be carried out using a brush in 2 coats over the steel substrate at an interval of 4-6 hours. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of steel substrate prior to applying Dr. Fixit Epoxy Zinc Primer	Kg	
3.	Protective Coating – Coal Tar Epoxy Providing & applying 2 coats of Dr. Fixit Coal Tar Epoxy of Pidilite Industries Ltd; 2 component coal tar epoxy based coating. The product attains a dry film thickness of 250-300 μ when fully cured. The two coats are to be applied in a span of 8-10 hours. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to applying the protective coating	Kg	
4	Protective Coating – Anti Carbonation Providing & applying 2 coats of Dr. Fixit Concrete Guard of Pidilite Industries Ltd; single component acrylic coating. The product attains a dry film thickness of 150 μ when fully cured. The coating possesses a Carbon Dioxide Diffusion Coefficient of 7 x 10-8 sqcm/sec. The two coats are to be applied in a span of 5 hours. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate & application a suitable primer prior to applying the protective coating	Kg	
5	Protective Coating – Elastomeric Providing & applying 2 coats of Dr. Fixit Raincoat of Pidilite Industries Ltd; single component elastomeric-acrylic coating. The product attains a dry film thickness of 110 μ when fully cured. The coating possesses 100% elongation & can bridge hairline cracks up to 0.5 mm. The two coats are to be applied in a span of 4-5 hours. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate & application of a suitable primer prior to applying the protective coating	Kg	

BOQ – Injection Grouts			
Sr. No.	Specification	UOM	Rate
1.	Injection grouting – PU Foam Providing Polyurethane injection grout, Dr. Fixit PU Foam Injection of M/s Pidilite Industries Ltd; 2 component injection resin system which is hydrophobic in nature & foams up to 30 times its volume on contact with water. The said system is inert, hence safe for potable water contact & non-bio degradable in nature. The application may be carried out in a staggered manner or in a grid pattern as desired by the Engineer in-charge. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to grouting	Kg	
2.	Injection grouting – PU Resin Providing Polyurethane injection grout, Dr. Fixit PU Plain Injection of M/s Pidilite Industries Ltd; 2 component injection resin system which is water insensitive & sets effectively in presence of water. The said system is inert, hence safe for potable water contact & non-bio degradable in nature. The application may be carried out in a staggered manner or in a grid pattern as desired by the Engineer in-charge. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to grouting	Kg	
3.	Injection grouting – Microfine Cementitious Providing Polyurethane injection grout, Pagel ZS10 of M/s Pidilite Industries Ltd; 2single component pre-packed cementitious micro fine injection grout. The said grout has a fineness of 16000 Blaines which is 5 times finer than normal OPC & penetrates cracks <0.8 mm very effectively. Water/ powder ratio of 0.35-0.45 to be maintained at all times. Storing, mixing & application to be done strictly in accordance with the manufacturer's instructions. Applicator to ensure complete surface preparation of concrete substrate prior to grouting	Kg	

CASE STUDY I

Following are some of the prestigious projects successfully reinstated using Dr. Fixit / Pagel Repair Systems

Project	NHAI Project - Chikkaballapura – Bagepalli Section - NH5
Client	KNR Patel Infrastructures
Nature of project	Construction of new bridges & strengthening of existing ones
Year of execution	2010-2011
Scope of work	Repairs & structural strengthening of bridge structure

Proposed solution

- Anti-corrosive treatment to steel reinforcement using epoxy zinc primer
- Reinstating of spalled concrete using structural grade, single component, cementitious mortars
- Strengthening of structure by means of epoxy injection grouting

Dr. Fixit products used

- Dr. Fixit Epoxy Zinc Primer
- Dr. Fixit Epoxy Bonding Agent
- Dr. Fixit Epoxy Injection Grout
- Pagel U10/40/80
- Dr. Fixit Magic Mortar

Project	Nehru Memorial College, Mangalore
Client	KVG Institution
Consultant	M/s Mistry Consultants, Bangalore
Nature of project	Repairs to institutional buildings
Year of execution	2010-2011
Scope of work	Structural repair of building

Proposed solution

- Anti-corrosive treatment to steel reinforcement using epoxy zinc primer
- Re-plastering using Polymer Modified Mortar
- Reinstatement of RCC sections using structural grade, single component, cementitious mortars & micro concrete

Dr. Fixit products used

- Dr. Fixit Epoxy Zinc Primer
- Dr. Fixit Epoxy Bonding Agent
- Dr. Fixit Pidicrete URP
- Pagel U10/40/80
- Dr. Fixit Micro Concrete

CASE STUDY 3

Following are some of the prestigious projects successfully reinstated using Dr. Fixit / Pagel Repair Systems

Project	Indira Dock, Mumbai Port Trust, Mumbai
Client	Department of General Works, South Division - MBPT
Nature of project	Repairs to Jetty-Buttress structure
Year of execution	2009-2010
Scope of work	Structural repairs to jetty fenders

Proposed solution

- Rust removal treatment on steel reinforcement using chemical rust remover
- Anti corrosive treatment to steel reinforcement using mineral based rust passivator
- Reinstatement of RCC sections using structural grade, single component, cementitious mortars & micro concrete

Dr. Fixit products used

- Pagel MSO2
- Pagel U10/40/80
- Dr. Fixit Micro Concrete

Tata Chemicals, Bamrola (U.P.)	ACC Baragrh
Sanchat Bhavan, Delhi	Khariar Dam Head Regulator
KVG, Mangalore College buildings	MES Kalaikunda
NHAI, Bangalore Hyderabad Highway Bridges Repairs	Rengali Dam
Almatti Dam Power House Repairs	L&T Railway Link Project
Kadra Dam Pump House Repairs	Vedanta Captive Power Plant
Kodasahalli Dam Pump House Repairs	Durgapur Cement Works
NHAI, Bangalore Kunigal Highway Bridge Repairs	Tatwa Builders Basement
NHAI, Bangalore Kolar Highway Bridge Repairs	Eden Gardens Sapoorji Pallonji
Sindu Cargo	IIT Kharagpur
NPCIL Kaiga	MES Panagrh
ACC Chaibasa	Balmer Laurie HO Kolkata
ACC Madhukunda DCSL	Marg Riverside Mall Project
JSL Duburi	

REPAIRS – JACKETTING / ENCASEMENT

Specification	Product Recommended	Benefits
Standard – Cement based repair		
Bonding Coat: Polymer modified bond coat.	Dr. Fixit Pidicrete URP/MPB	Very economic solution
Existing Rebar Corrosion Protection: Cleaning with rust remover & applying protective coating	Dr. Fixit Rust Remover & Dr. Fixit Epoxy Zinc Primer	User friendly application
Patch Repair: Reinstating polymer modified mortar	Dr. Fixit Pidicrete URP/MPB	
High build – Cement based repair		
Bonding Coat: No bond coat required		Equally effective in over-head & vertical situations
Existing Rebar Corrosion Protection: Cleaning with rust remover & applying protective coating	Dr. Fixit Rust Remover & Dr. Fixit Epoxy Zinc Primer	High build thickness upto 40 mm can be achieved in single application
Patch Repair: Reinstating using single component, polymer modified mortar	Dr. Fixit Magic Mortar	One component mortar makes the application user friendly.
Structural grade, high strength – Cement based repair		
Bonding Coat: Polymer modified/epoxy bond coat	Pagel U10/Dr. Fixit Epoxy Bonding Agent	Highly effective in structural repairs
Existing Rebar Corrosion Protection: Cleaning with rust remover & applying protective coating	Dr. Fixit Rust Remover & Pagel MSO2/ Dr. Fixit Epoxy Zinc Primer	One component mortar makes the application user friendly.
Patch Repair: High strength single componant mortars,	Pagel U10/40/80	Protect exposed and unexposed reinforcement from corrosion.
Protective Coating: Anti carbonation, weather proof coating	Dr. Fixit Concrete Guard	Can build thickness of 5-100 mm
Structural grade, fast-setting – Cement based repair		
Bonding Coat: Polymer modified/epoxy bond coat	Pagel U10/Dr. Fixit Epoxy Bonding Agent	Highly effective in fast setting repairs
Existing Rebar Corrosion Protection: Cleaning with rust remover & applying protective coating	Dr. Fixit Rust Remover & Pagel MSO2/Dr. Fixit Epoxy Zinc Primer	One component mortar makes the application user friendly.
Patch Repair: High strength single componant mortars,	Pagel R20/20, 20/80	Protect the substrate from all kinds of chemical and environmental attack.
Protective Coating: Anti carbonation, weather proof coating	Dr. Fixit Concrete Guard	Very high abrasion resistance
Structural grade, high strength – Resin based repair		
Bonding Coat: Epoxy bond coat	Dr. Fixit Pidipoxy EC/ Dr. Fixit Epoxy Bonding Agent	Recommended for high strength structural repairs
Existing Rebar Corrosion Protection: Cleaning with rust remover & applying protective coating	Dr. Fixit Rust Remover & Dr. Fixit Epoxy Zinc Primer	Protect exposed and unexposed reinforcement from corrosion
Patch Repair: High strength single componant mortars,	Dr. Fixit Repair Mortar	Protect the substrate from all kinds of chemical and environmental attack
Protective Coating: Anti carbonation, weather proof coating	Dr. Fixit Concrete Guard	Very high abrasion resistant and bond strength
Splash Zone Application		
Bonding Coat: Polymer modified/Moisture in-sensitive epoxy bond coat	Pagel U10/Dr. Fixit Epoxy Bonding Agent/Dr. Fixit Pidipoxy MIEP	High durability
Existing Rebar Corrosion Protection: Cleaning with rust remover & applying protective coating	Dr. Fixit Rust Remover & Pagel MSO2/ Dr. Fixit Epoxy Zinc Primer	High strength
Patch Repair: High strength single componant mortars,	Pagel U10/ Pagel U40/ Pagel U80	High abrasion and impact resistant
Protective Coating: Anti carbonation, weather proof coating	Dr. Fixit Coal Tar Epoxy	Protect substrate from salty, water, mild chemicals and microbes

REPAIRS – JACKETTING / ENCASEMENT

Specification	Product Recommended	Benefits
Bonding Coat: Epoxy bond coat	Dr. Fixit Concrete Super Bond	High durability
Existing Rebar Corrosion Protection: Cleaning with rust remover & applying protective coating	Dr. Fixit Rust Remover & Dr. Fixit Epoxy Zinc Primer	High strength
Rebar Anchoring: Anchor-fixing using polyester resin grout	Dr. Fixit Anchorfix S/P	Protect substrate from salty, water, mild chemicals and microbes
Micro-concrete: Jacketing using polymer modified micro-concrete	Dr. Fixit Micro Concrete	
Protective Coating: Anti carbonation, weather proof coating	Dr. Fixit Concrete Guard	
Splash Zone Application		
Bonding Coat: Moisture in-sensitive epoxy bond coat	Dr. Fixit Concrete Super Bond/ Dr. Fixit Pidipoxy MIEP	High durability
Existing Rebar Corrosion Protection: Cleaning with rust remover & applying protective coating	Dr. Fixit Rust Remover & Dr. Fixit Epoxy Zinc Primer	High strength
Rebar Anchoring: Anchor-fixing using polyester resin grout	Dr. Fixit Anchorfix S/P	High abrasion and impact resistant
Micro-concrete: Jacketing using polymer modified micro-concrete	Dr. Fixit Micro Concrete	Protect substrate from salty, water, mild chemicals and microbes
Protective Coating: Anti carbonation, weather proof coating	Dr. Fixit Coal Tar Epoxy	
Underwater Application		
Reinstating Repair: Re-profile using anti-washout grout	Pagel V14/40 UW	One component mortar makes the application user friendly
		High strength

INJECTION SYSTEMS

Stopping of Drip leakage		
Injection Grouting: Injecting hydrophilic PU foaming grout	Dr. Fixit PU Foam Injection	Instant plugging of active leakage
		Safe for potable water contact
Arresting Severe Water Dampness & Flexible Sealing of Cracks		
Injection Grouting: Injecting moisture insensitive PU resin grout	Dr. Fixit PU Plain Injection	Effectively seals severe dampness
		Safe for potable water contact
		Highly durable - Elastic sealing of cracks
Structural Strengthening of Parent Concrete		
Injection Grouting: Injecting high strength epoxy resin grout	Dr. Fixit Epoxy Injection Grout	Highly effective in structural strengthening
		Low viscosity & high penetration
		Extremely durable system for repairs
Arresting Mild Water Leakage/Dampness		
Injection Grouting: Injecting high strength single component cementitious grout	Pagel ZS10/ZL10	Easy to use: Single component
Sealing Rising Water Dampness		
Injection Grouting: Injecting siliconate based waterproofing system	Dr. Fixit Dampfree	Economical
		Easy to use: Single component

PROTECTIVE COATINGS

Specification	Product Recommended	Benefits
Severe Exposure Conditions		
Primer:Apply solvented surface sealing acrylic primer	Dr. Fixit Primeseal SB	High diffusion resistance against CO2 and Cl
Coating: 2 coats of protective coating	Dr. Fixit Concrete Guard	Crack bridging capability.
		Water-vapour permeable.
		UV, algae & fungus resistant
		Available in different colours
Mild Exposure Conditions		
Primer:Apply surface sealing acrylic primer	Dr. Fixit Primeseal	Crack bridging capability.
Coating: 2 coats of protective coating	Dr. Fixit Raincoat	Water-vapour permeable.
		UV, algae & fungus resistant
		Available in different colours
Sewerage and Wastewater Applications		
Protective Coating: Anti carbonation, weather proof coating	Dr. Fixit Coal Tar Epoxy	Excellent resistance to water and water soluble chemicals
		Very high impact and abrasion resistant
		Resistant to microbes
		Ideal for sewage treatment plants, harbours, hydraulic steel structures

Pidilite

Company

Pidilite Industries has been the pioneer and market leader in adhesives and sealants, construction chemicals, hobby colours and polymer emulsions in India. We started manufacturing white glue – Fevicol only in 1959, and have now grown to cater to various other categories including paint chemicals, automotive chemicals, art materials and stationery, fabric care, maintenance chemicals, industrial adhesives, industrial and textile resins and organic pigments and preparations.

Unique Brands

Pidilite has some of the biggest and strongest brands in the adhesives and sealants category. These brands include Fevicol, M-seal and Fevikwik. Fevicol has become synonymous with adhesives to millions all over India and is ranked amongst the most-trusted brands in the country. Some of our other major brands are Dr. Fixit, Pagel & Roff in Construction Chemicals, Cyclo and Motomax in auto care, Ranipal in fabric care and Hobby Ideas in the Do-It-Yourself range of hobby and craft products.

FEVICOL

DR. FIXIT FOR HEALTHY CONSTRUCTION

Roff PREVENT · PROTECT · PRESERVE

m-seal

cyclo

fevitite

MOTOMAX

Ranipal

Fevicryl hobby ideas

State-of-the-Art Manufacturing

Pidilite continuously invests in state-of-the-art manufacturing facilities across 18 locations in India and 7 other countries.

R&D Facilities

We develop most of our products in-house with the help of a strong, research-driven innovation led by consumer insights. Innovation being one of the core values of the company, Pidilite established a state-of-the-art research centre in Singapore to expand the company's product innovation strategy and attract international talent to work on its in-house global brands.

Construction Chemicals Division

Pidilite has a unique mission to ensure that the latest in construction chemical technology reaches the Indian masses. To help achieve this mission Pidilite has wide distribution network and an army of trained applicators who ensure that the correct solution is provided for Healthy Construction. Since Dr. Fixit - the waterproofing expert, was launched almost a decade ago; it has become the undisputed leader in the waterproofing category. In addition to waterproofing, Dr. Fixit offers solutions in Tile Fixing, Building Repairs, Sealants, Coatings & Paints, Grouts, Flooring and Concrete Admixtures.

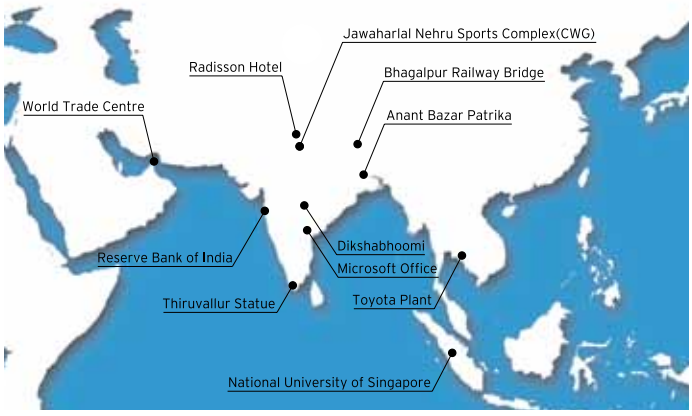
To further propagate the message of "Healthy Construction", Pidilite has set up a not-for-profit organisation – Dr. Fixit Institute of Structural Protection and Rehabilitation. The aim is to enlighten professionals and applicators about the latest advances in technology and challenge the wrong conventional building techniques. It has also set up an Advanced Diagnostic Laboratory and library for the industry professionals on its campus.

Global Presence

Pidilite is growing its international presence through acquisitions, setting up manufacturing facilities and sales offices in important regions around the world. Our products have been very well received in international markets and are now exported to more than 100 countries. In order to achieve sustained growth in international business, we are expanding our distribution network in various countries and also deploying additional manpower.

We have established offices / subsidiaries in several countries including USA, UK, Brazil, UAE, Saudi Arabia, Indonesia, Egypt, Bangladesh, Kenya, South Africa and Ghana. Besides distribution, we are carrying out various brand-building activities in these countries to establish our brands

Global Prestigious Projects



Dr. Fixit brings you the widest range of Construction Chemicals

Pidilite

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