B2B PURCHASE

BY EDIT TEAM

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Guidelines to make concrete durable

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By Edit Team

chemical and coatings construction chemicals Hasan Rizvi

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Durability is a key determinant for both new construction and repair of old structures. The durability of concrete structures can be defined as their ability to sustain the serviceability for which they were designed. In concrete, quality assurance is a matter of testing and inspecting to ensure the proper selection, proportioning, mixing, handling, placing, and curing of the materials, as well as the appropriate design of the structure itself.

The following points should be taken into account for both the construction of new concrete structures and the repair of old and deteriorated structures:

Factors affecting the durability of structures

- Poor quality construction
- Lack of waterproofing treatment
- Poor maintenance, blocked drain pipes
- DPC failure
- Lack of proper slope causing stagnation of water
- Leaking pipe joints.

Waterproofing of structures

- Basements (SuperThermolay APP membrane/ STP PVC membrane)
- Roof (SuperThermolay APP membrane / STP PVC membrane / ShaliCem EWP)
- Sunken (ShaliCrete –R)
- Planters (STP Hybrid System: ShaliUrethane LHM and ShaliCrete-R)
- Over Head and Underground Tanks (ShaliCem EWP).

Water bodies, fountains (ShaliCem EWP, Injection grouting with ShaliGrout IP)

General concrete deterioration

Most concrete deterioration can be attributed to water penetration. Concrete absorbs moisture until it becomes saturated. When water enters in to the concrete structure it results in spalling of the concrete. Therefore, this needs to be prevented.

Migratory Corrosion Inhibitor, being Amine based bipolar in nature, used as an additive during concreting / Repairs, can protect the steel from corrosion in aggressive environment.

- Migratory Corrosion Inhibitor (ShaliPlast RCI)
- Microconcrete (ShaliFix MC)
- Epoxy Bonding Agent for joining old and new Concrete (ShaliBond Concrete).

against corrosion. Water cement ratio should be kept as low as possible so as to get a dense concrete which will helps to prevent the ingress of water and water-borne salts, Carbondioxide, Chloride and Sulphurus gases.

STP pioneered solutions for dampness

Procedure consists of removing the plaster from the effected walls upto a height of 1.0 meter, above the affected area.

- Drilling holes (18 mm dia, with 125 mm spacing) along the length of the wall near the skirting level
- Each drilled hole will be connected with an inverted bottle filled with silicate base STP Shalimagic (for about two days), height of the bottles should be 1 metre above the drilled hole.

STP products are "Made for India"

In recent past, usage of construction chemicals has increased, as the construction industry had grown on a sustainable basis. The trend is towards liquid applied membranes as they can be applied on any shape of the surface. India has the ability to develop indigenous technologies, processes, rather than importing the technologies. Construction chemical manufacturers like STP Ltd. are promoting durable technologies suitable for our affordability and environment. STP products are suitable for Indian weather and climatic conditions.

Authored by_
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