

METHODOLOGY FOR WATERPROOFING BASEMENT FROM +VE SIDE 15 (FIFTEEN) YEARS GUARANTEE

“CATALYTIC” IN-DEPTH CRYSTALLIZATION WATERPROOFING SYSTEM FOR PCC BELOW BASEMENT RAFT / FOOTING:

- The civil contractor shall pour PCC concrete below raft / footing etc., and level it using a wooden trowel.
- (A) Recommended concrete mix design for PCC concrete is M-15, i.e. 1 : 2 : 4 and minimum thickness of 6 inches. The 1:2:4 (M-15) PCC if poured in 6 inches thick layer shall give honeycomb-free leveled surface. The civil contractor shall cure the PCC by spraying water over it periodically.
- Alternatively, a mix design of M-10, i.e. 1 : 3 : 6 can be used for PCC, but a levelled surface, which is free of honeycombing, must be given to us by the civil contractor for the subsequent waterproofing treatment. This can be done by simultaneously spreading with a broom, a 1 - 2 mm thick, 1:1 cement-sand slurry over 'green' 1 : 3 : 6 PCC .
- (B) We shall allow the PCC to set a minimum period of 24 - 48 hours and then clean the PCC concrete surface thoroughly. We shall ensure that the surface is free of loose material, dirt, dust, oil, grease or other foreign matter before we start W. P. treatment.
- (C) We shall plug any minor leakages on the PCC with **GS 109 Crystalline Mortar**.
- (D) **GS 101® “Catalytic” In-depth Crystallization Waterproofing System** shall be applied by us **at the total coverage of 1 Kg / SMT** on the entire PCC below raft and the footings. The Waterproofing System shall include treatment of joints (a) between the PCC and the Raft along the periphery, (b) between the columns and the PCC and (c) between the columns and the raft with Crystalline Mortar.
- (E) GS 101® “Catalytic” In-depth Crystallization Waterproofing System shall be allowed to set for at least 8 – 10 hours and then we shall start curing with misty fog spray / wet cloth for 3 – 4 days at least 3 times a day. We shall barricade the “applied” area during the curing period of 3 – 4 days. The treatment achieves its full hardness in 2 days and cannot be abraded by walking, moving trolleys, etc. Reinforcement tying work by civil contractor can commence after the curing period of 2 days is completed.
- (F) Tying the reinforcement and casting the raft slab / footing to be done by the civil contractor. Just before the subsequent pour of raft concrete, GS 101® Crystalline Material shall be applied by us at the entire thickness of the construction joint of the previous pour of raft concrete.

GS 101® “CATALYTIC” IN-DEPTH CRYSTALLIZATION WATERPROOFING SYSTEM FOR RETAINING WALL / VERTICAL SURFACE OF FOOTINGS:

- (A) Casting the RCC Retaining Wall by the civil contractor and allowing setting for at least 24 – 48 hours.
- (B) After de-shuttering by the civil contractor, we shall clean the retaining wall / footing vertical surface thoroughly. We shall ensure that the surface is free of loose material, dirt, dust, oil, grease or other foreign matter, before starting waterproofing treatment.
- (C) **Treatment of Construction Joints on retaining wall by us :**
- (a) Cutting ‘U’ shaped groove of approx. 1” (W) x 1½ “ (D) along the construction joints with a mechanized cutting machine / chipping hammer.
- (b) Filling the ‘U’ groove upto surface with “**GS 109 Crystalline Mortar**” after application of Crystalline slurry in to the groove.
- (D) **Treatment of Surface Honeycombs on the retaining wall by us :**
- (a) Removing unsound concrete upto sound concrete in a ‘U’ shaped cavity around the honeycombing.
- (b) Filling the ‘U’ cavity upto surface with “**GS 109 Crystalline Mortar**” after application of Crystalline slurry in to the cavity.

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(E) Treatment of Tie Holes on the retaining wall by us :

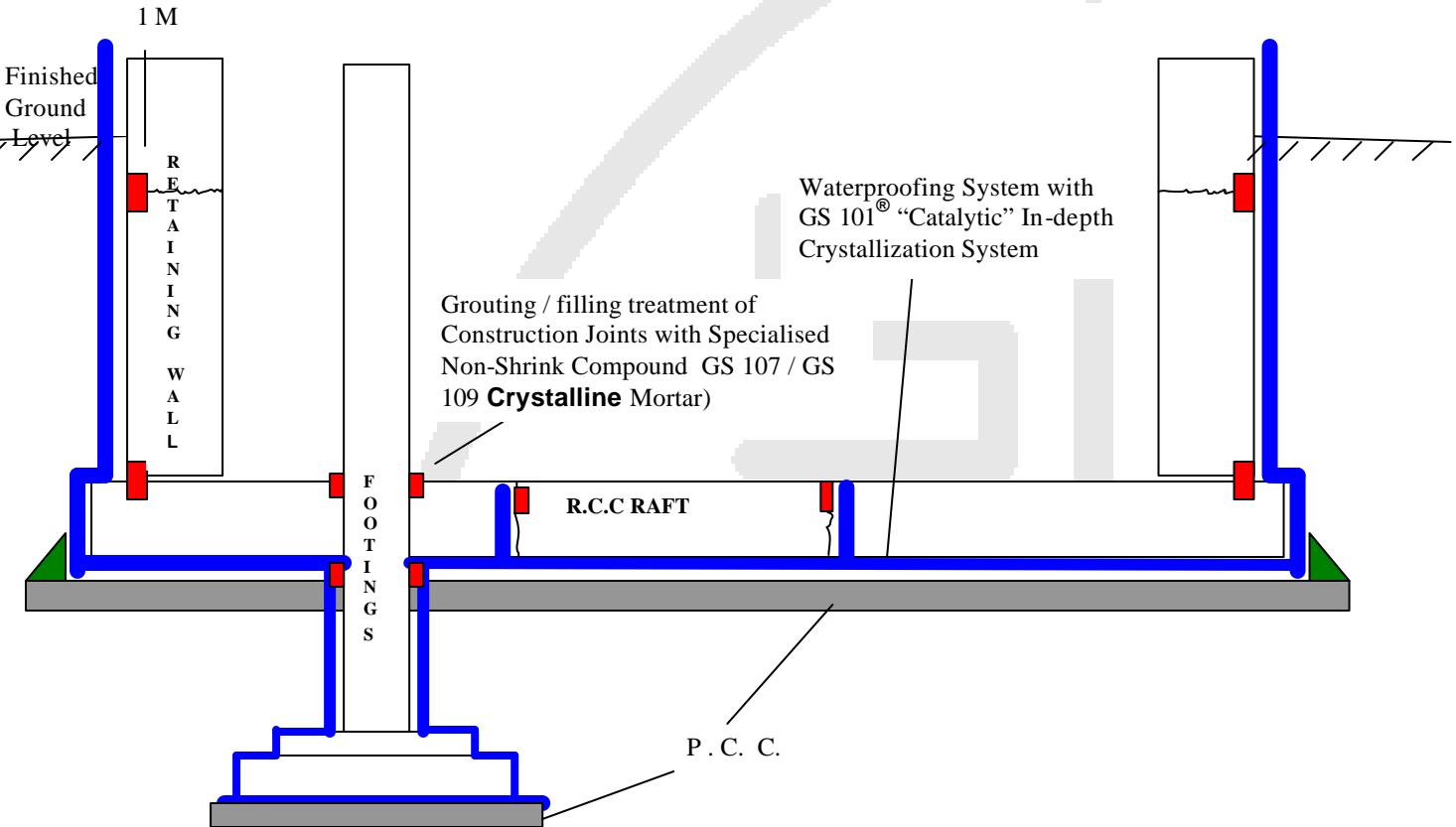
- (a) Cutting 'U' Shaped cavity of approx. 2" (W) x 2" (D) around the tie hole.
- (b) Filling the 'U' cavity upto surface with "GS 109 Crystalline Mortar" after application of Crystalline slurry in to the cavity.

(F) GS 101® "Catalytic" In-depth Crystallization waterproofing System shall be applied by us at the total coverage of 1 Kg / SMt on the entire RCC retaining wall from outside / footing vertical surface. The treatment on the retaining wall shall extend from the toe of the raft upto 1 m above the finished floor level.

(G) "Catalytic" In-depth Crystallization System shall be allowed to set for atleast 8 – 10 hours and then we shall start curing with misty fog spray for 3 – 4 days atleast 3 times a day.

NOTE :

- (1) Backfilling of soil by the civil contractor can take place 36 hours after the waterproofing application. If backfilling takes place within seven days after the application, the backfilling material should be moist so as not to draw moisture from Crystalline Coating.
- (2) Should there be leakage/ seepage/ dampness from the construction joints on raft after casting the raft, it shall be grouted/plugged from the negative side using GS 107 / GS 109 Crystalline Mortar



 GS 101® "CATALYTIC" IN-DEPTH CRYSTALLINE WATERPROOFING SYSTEM IN **BOX-TYPE** FASHION

 **GROUTING / FILLING TREATMENT OF CONSTRUCTION JOINTS/ SURFACE HONEYCOMBS / TIE HOLES WITH GS 107 / GS 109 CRYSTALLINE MORTAR**

 **MAKING WATA AT JOINT BETWEEN PCC AND RCC RAFT WITH GS 109 CRYSTALLINE MORTAR**