REVIEW ANALYSIS OF INDIAN STANDARD

(To be submitted to the Sectional Committee)

1. **Sectional Committee No. & Title:**Building Construction Practices Sectional Committee CED 13

2. **IS No: IS : 12727:1989**

3. **Title :No- fines cast in situ cement concrete-Code of practice**

4. **Date of review:**

5. **Review Analysis**

i) Status of standard(s), if any from which assistance had been drawn in the formulation of this IS.

Standard (No.& Title)	**Whether the standard has since been revised**	**Major changes**	**Action proposed**
References:- 1)Civil Engineering Hand book-P.K. Khanna	**yes**	**Scope** 1.1 No- fine concrete 3.3	**<u>Addition</u>** No- fine concrete is prepared using ordinary Portland cement, water and coarse aggregate. **The Principal applications of no fines concrete are for load bearing cast in place external wall of single storey and multistoried buildings, small retaining walls and as a damp proofing sub base material for concrete floor as well as road paving and surface treatment to permit water drainage.** **<u>Addition</u>** **No- fines concrete is porous, permeable and cellular concrete. Density is very low, reduction in dead weight with respect**

			to normal concrete ,capillary movement is almost nil, it has better thermal insulating characters due to presence of large voids. Shrinkage is lower than normal concrete, It imparts better and attractive appearance. Cutting and making holes shall be avoided in this concrete. Reinforcement, which is not a normal system with no-fines concrete, when required in openings should be bedded in cement mortar. In no-fine concrete there is reduction in formwork and propping with respect to normal concrete.
		5.4.2 Strength	**<u>Addition</u> Compressive strength shall be varied depending on the type and size of coarse aggregate , unit weight, water cement ratio and aggregate cement ratio.**
The concrete society(www.concrete.org.uk),concrete@fingertips		Expansion Joints in wall 7.5.2	**Expansion Joints play a valuable part in earthquake resilience, it can absorb and relieve the forces of a seismic event, reducing the risk of structural failure. As with other threats, the joints manage controlled movement between walls.**
		Fixing 8.1	**<u>Addition</u>** The base coat of rendered walls generally has a good bonding to no fines concrete.

			Further in no- fine concrete, **nylon plug can be inserted into a hole and a pin shall be driven or screwed into the plug for fixing.**
		weep Holes 10.1	**<u>Addition</u>** **Weep holes should be formed at the foot of the wall or above concrete lintel to allow any water which might penetrate the rendering to escape to the outside of the wall. It is essential that weep holes are placed at regular intervals.**
		Necessary Information 12 12.1	**<u>New addition</u>** For efficient construction of no- fine concrete, detailed information with regard to following is necessary:- a)size and type of coarse aggregate b)Water cement ratio c)aggregate cement ratio d) location and size of weep holes e)location of Expansion joint, vertical joint and construction joint f)Location of reinforcement around openings.
		Fire Resistance 13 13.1	**<u>New addition</u>** This type of construction does not require any fire resistance measures.

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ii) Status of standards referred in the IS

Referred standards (No. & Title)	IS No. of this standards since revised	Changes that are of affecting the standard under review	Action proposed

iii) Any other standards available related to the subject & scope of the standard being reviewed (International/regional/other national/association/consortia, etc or of new or revision of existing Indian Standard)

Standard (No. & Title)	Provisions that could be relevant while reviewing the IS	Action proposed

iv) Technical comments on the standard received, if any

Source	Clause of IS	Comment	Action proposed

v) Information available on technical developments that have taken place (on product/processes/practices/use or application/testing/input materials, etc)

Source	Development	Relevant clause of the IS under review that is likely to be impacted (Clause & IS No.)	Action proposed

vi) Issues arising out of changes in any related IS or due to formulation of new Indian Standard

Related IS and its Title (revised or new)	Provision in the IS under review that would be impacted & the clause no. or addition of new clause/provision	Changes that may be necessary in the Standards under review	Action proposed

vii) Any consequential changes to be considered in other IS

Related IS to get impacted	Related IS Title	Requirements to be impacted

6. Any other observation:

7. Recommendations:

To refer the following segment for the proposed for the proposed changes marked in red.