Indian Standard

IMPROVING EARTHQUAKE RESISTANCE OF EARTHEN BUILDINGS – GUIDELINES

1 SCOPE

1.1 The guidelines covered in this standard deal with the design and construction aspects for improving earthquake resistance of earthen houses, without the use of stabilizers, such as cement, lime, asphalt, admixtures, etc.

1.2 The provisions of this standard are applicable for seismic zones III, IV and V. No special provisions are considered necessary in zones I and II (*see* IS 1893 : 1984 for seismic zones).

NOTES

1 Earthen buildings are inherently weak against water and earthquakes, and should preferably be avoided in flood prone, high rainfull areas and seismic zones IV and V.

2 Attention is hereby drawn to the fact that earthen construction as dealt with herein will neither qualify us engineered construction nor totally free from collapse in severe seismic intensities VIII and IX on MMI[1)] scale. However, Inclusion of special design and construction features as recommended in this standard will raise their weather and seismic resistance appreciably reducing greatly the chances of collapse even in such seismic intensities.

2 REFERENCES

The following Indian Standards arc the necessary adjuncts to this standard:

IS No.	*Title*
883 : 1993	Code of practice for design of structural timber in building *(fourth revision)*
1893 : 1984	Criteria for earthquake resistant design of structures
2720 (Part 7) : 1980	Methods of test for soils: Part 7 Determination of water content - dry density relation using light compaction (*second revision*)