भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

भारतीय मानक ब्यूरो ने एक नए भारतीय मानक, आईएस 16700 : 2017 'ऊँची इमारतों की संरचनात्मक सुरक्षा के मानदंड' को जारी किया ताकि उपयोगिता (सर्विसबिलिटी) पहलू को ध्यान में रखने के अलावा हवा और भूकंप बलों के खिलाफ सुरक्षा के लिए इमारतों के डिजाइन के लिए भी संरचनात्मक इंजीनियरों को मार्गदर्शन प्रदान किया जा सके।

BIS releases a new Indian Standard, IS 16700:2017 on 'Criteria for Structural Safety of Tall Concrete Buildings' to provide guidance to structural engineers for design of tall buildings for safety against wind and earthquake forces apart from serviceability considerations.

IS 16700:2017 'ऊँची इमारतों की संरचनात्मक सुरक्षा के मानदंड'
IS 16700:2017 'Criteria for Structural Safety of Tall Concrete Buildings'

With the rising standard of living in urban areas and population explosion, cities are growing vertically and there is pressure throughout the world to construct taller buildings to provide accommodation for residential, offices and commercial uses. However, taller buildings are subjected to higher level of forces and protection in respect of safety and performance requirements, particularly with respect to wind load and earthquake forces. BIS has, therefore, formulated an Indian Standard on IS 16700 : 2017 on 'Criteria for structural Safety of Tall Concrete Buildings', to cover structural safety and serviceability aspects relating to reinforced concrete buildings of height greater than 50 m and up to 250 m.

This standard is based on prescriptive approach and covers the following design and serviceability aspects of reinforced concrete tall buildings:

a) Selection of appropriate structural system;
b) General requirements including: (1) height limitations of different structural systems, (2) elevation and plan aspect ratios, (3) lateral drift, (4) storey stiffness and strength, (5) density of buildings, (6) modes of vibration, (7) floor systems, (8) materials, and 9) progressive collapse mechanism;
c) Integrity of structural system;
d) Resistance to wind and earthquake effects; and
e) Other special considerations related to tall buildings

For buildings that do not conform to the prescriptive requirements of this standard, that is, Code-Exceeding Tall Buildings, a more rigorous procedure is necessary for design and review. The standard

provides (in Annex A) general procedure to be adopted to proportion, analyze, design, detail, gain approval and construct such buildings. Performance objectives or procedures more stringent than those specified in Annex A may be specified by the client/owner of the building or by the tall building committee appointed by the local authority administering the building project. Such code-exceeding tall concrete buildings shall require a performance-based design approach to demonstrate that the performance of the building meets at least that intended by the prescriptive design provisions laid down in this standard. The idea is to ensure much more structural safety, redundancy, and structural efficiency for a limited cost.

This standard shall be read along with other Indian Standards relevant to design and construction of buildings and structures. In case of conflict, clauses given in this standard shall be applicable.

The standard is available for purchase at various BIS sales outlet and may also be purchased online at the link www.standardsbis.in.