IS 5514:1996 – Specification for Apparatus Used in Le-Chatelier Test

IS 5514:1996 specifies the technical requirements for the apparatus employed in the Le-Chatelier test, primarily used to determine the soundness of cement by measuring its expansion. This test apparatus is crucial in assessing the stability and durability of cement to ensure it meets the standard quality requirements in construction applications. The apparatus detailed in the standard includes the Le-Chatelier mold, a brass device with split sides and two indicators positioned on either side to gauge expansion precisely.

The standard prescribes the exact dimensions, including the height, internal diameter, and thickness of the brass mold, and the shape of the split sides to ensure consistent measurements across tests. It also defines the mechanical properties, such as rigidity and resistance to deformation, as well as temperature control guidelines essential for accurate expansion readings.

IS 5514:1996 emphasizes calibration standards and specifies tolerances to maintain uniformity in testing results, alongside maintenance practices for prolonged apparatus life. Adherence to this specification enables laboratories to accurately measure cement expansion, ensuring materials meet safety and reliability criteria as per national construction standards. This standard is essential for laboratories and manufacturers aiming to maintain high-quality, consistent cement testing methods across the industry.