

The Scleroscope Hardness Test

The Scleroscope test consists of dropping a diamond tipped hammer, which falls inside a glass tube under the force of its own weight from a fixed height, onto the test specimen. The height of the rebound travel of the hammer is measured on a graduated scale. The scale of the rebound is arbitrarily chosen and consists on Shore units, divided into 100 parts, which represent the average rebound from pure hardened high-carbon steel. The scale is continued higher than 100 to include metals having greater hardness.

In normal use the shore scleroscope test does not mark the material under test. The Shore Scleroscope measures hardness in terms of the elasticity of the material and the hardness number depends on the height to which the hammer rebounds, the harder the material, the higher the rebound. Advantages of this method are portability and non-marking of the test surface.

The Durometer

The Durometer is a popular instrument for measuring the indentation hardness of rubber and rubber-like materials. The most popular testers are the Model A used for measuring softer materials and the Model D for harder materials.

The operation of the tester is quite simple. The material is subjected to a definite pressure applied by a calibrated spring to an indenter that is either a cone or sphere and an indicating device measures the depth of indentation.