

Microhardness Tester

Make: LECO

Model: LM 700 AT

Purpose: Microhardness testing is used to determine hardness of thin sheets, foils, fine wire, epoxies, etc.

Working Principle:

A diamond indenter of specific shape and size is used to carry out the hardness measurement. Vicker's indenter is a square based diamond pyramid. The included angle between opposite faces of the pyramid is 136° . The Vicker's hardness number (VHN) is defined as the ratio of load to the total area of indentation produced

$$VHN = 2L \sin(\theta/2) / d^2 = 1.8544 L / d^2 \text{ (Kg mm}^{-2}\text{)}$$

where, L (kg) is the applied load, d(mm) is the length of indentation diagonal and θ is the angle between opposite faces of diamond (136°).

Major Applications

Materials Science
Minerals
Polymers

Thin Sheets/Coatings
Rocks
Metals and alloys

