The 3 Most Reliable Portable Hardness Testing Methods

In response to the strong demand for testing products that are too large for conventional benchtop hardness testing methods, quality and manufacturing professionals are making more use of portable hardness testers.

Portable hardness testers will not replace the conventional benchtop machines, but nevertheless, they have become an indispensable addition for hardness testing units. During the last decades, several portable instruments based on different physical methods have been developed. Today, mobile units are widespread and accepted tools for portable, on-site hardness testing applications.

Top portable hardness testing methods

The three most reliable and commonly used methods for portable hardness testing are:

1. Leeb method (also known as Equotip or rebound method)
2. Portable Rockwell method
3. Ultrasonic Contact Impedance (UCI) method

Advantages of portable hardness testing

The main advantage of portable hardness testing equipment is – as the name suggests – the portability of the test equipment. The test piece no longer needs to be cut and to be brought to the hardness tester – today mobile handheld instruments allow measurements to be made on the spot.

Even large or heavy components can be tested without having to be moved. In addition to this, portable hardness testing equipment allows measurements on difficult to access positions or during the production, manufacturing or assembly process. Furthermore, in contrast to typical stationary hardness testing machines using the Vickers, Brinell or Rockwell principle, the use of portable equipment is not limited to the vertical position.

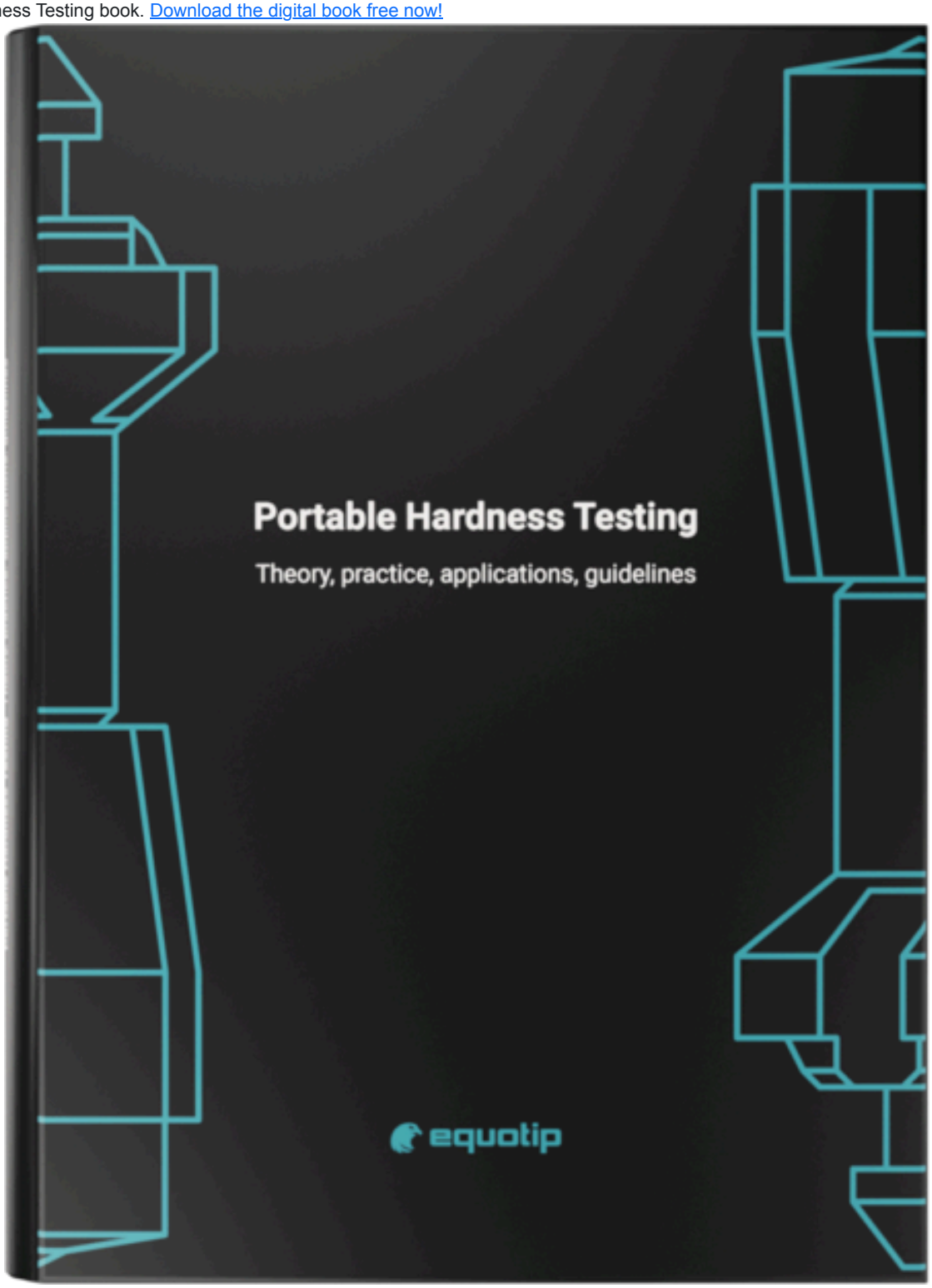
Today, several portable hardness testing instruments based on different physical methods are already particularly recognized in the practical field and solve plenty of mobile hardness testing tasks. However, each method is limited – more or less – to a specific application area and, therefore, the decision as to which method and instrument to use strongly depends on the testing application.

Equotip equipment allows measurements in different positions and directions with- out having to think about any corrections or adjustments. The only limitation to be considered here is that the hardness probe must be positioned perpendicular with respect to the surface of the test piece.

Solution

With the Equotip 550, Screening Eagle is now offering a solution for a wide range of portable hardness testing applications. The instrument now combines the three most established and widely spread test methods and, thus, solves the vast majority of conventional hardness testing problems and tasks.

A detailed description of each of the three most commonly used and reliable portable hardness testing methods, plus how to choose the most optimal method for each application, can be found in the world's first and most comprehensive Portable Hardness Testing book. Download the digital book free now!



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