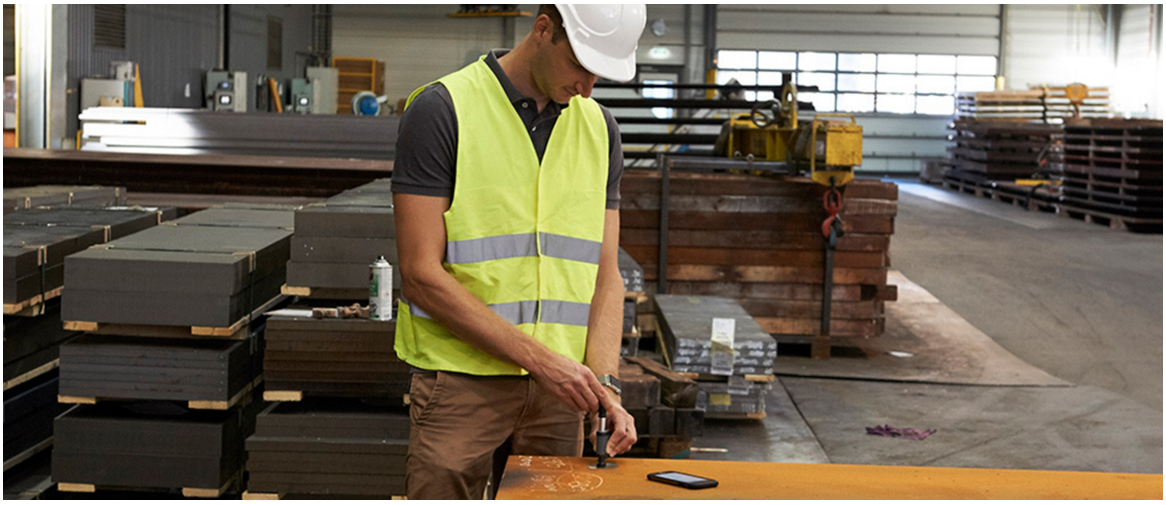

How to Prolong the Service Life of Your Portable Hardness Testers

As they say, failing to prepare is preparing to fail. This is especially true when it comes to getting the best results and increasing the service life of portable hardness testers.

Equotip hardness testers are designed for portable applications in industrial environments, and with just a few simple precautionary steps, you can improve the performance as well as prolong the service life of your device.

Before buying a new portable hardness tester, consider the various probe options that vary in type of impact body and impact energy. Different types of probes have different lifespans and within time they will experience varying degrees of wear-related drift (extend accuracy and quality of measurements).

Preparing the Tester

1. Only use the Equotip-supplied or -specified mains adapters for charging the instruments battery. The device can also be operated directly from the mains adapter.

2. Use the Equotip protective pouch, stand, or wall-mount.

3. Equotip cables are optimized to have additional flexibility. However, it is highly recommended to avoid sharp bends in the cables and sudden loads on connectors (these can occur, for example, if the cables get caught or coiled).

4. Using the test block supplied, check your Hardness Tester on regular basis to make sure it is operating properly.

Equotip Portable Rockwell Test blocks

Preparing the Probe

Minimize dirt build-up on the impact device and improve the accuracy by:

- Avoiding anything coming between the impact body and the surface as it absorbs the impact energy and causes a built-up of dirt within the tube.
- Machining the surface as per the Equotip Technical Information sheet on roughness requirements.
- Removing metal dust, abrasive grit, dirt, oil, grease, and other contaminants from the measuring point with a cloth.
- Placing the sample on a solid support base or in a holder / fixture.

Surface preparation

Equotip Surface Roughness Comparator

To minimize errors and get the very best results from your portable hardness testing and prevent damage, the surface must be prepapred adaquately.

Check out the pro tips for Surface Preparation in the Portable Hardness Testing book (page 52) to ensure precise and accurate measurments everytime.

Measurement Procedure

1. Hold the black loading tube with your pointer finger, middle finger, and ring finger on one side and your thumb on the other side. With the other hand, hold the coil casing as close as possible to the support ring.

2. Load the impact device in the air by slowly and evenly sliding the loading tube as far as it will go in the direction of the coil housing. Then slowly draw the loading tube back, never allowing it to snap back abruptly.

Note: Do not load the impact device directly on the test piece. With time you may damage the thread of your support ring or even the guiding tube.

3. Slightly depress the release button with your thumb and wait for approximately 1 second before the next measurement.

Tip: When performing measurements, wear clean gloves and take extra care not to touch the guide tube with dirty hands.

Routine Maintenance and Inspection

Screenshot from demo video

- Clean the guide tube at the end of each working day by inserting the Proceq brush (Check out this demo video), using rotating and rubbing motion.
- Clean the support ring and the impact body (especially indenter ball and catch pin) with acetone.
- Yearly inspection of the instrument by a Proceq-certified Service & Repair Centre is recommended.

Tip: Every week, clean the impact device from the inside (using an acetone-soaked cotton swab) and outside (using an acetone-soaked cloth).

Proper Storage

- Never leave the impact device out on the workbench.
- Do not coil the cable tightly.
- Clean the test surfaces of the hardness test block with acetone and cover with Proceq protective sticker.
- Store using the Equotip carry case in a dry location at room temperature.

Now you know the best ways to prolong the service life of your equipment, download the Portable Hardness Testing book for more pro tips to get the most accurate and repeatable results, everytime.