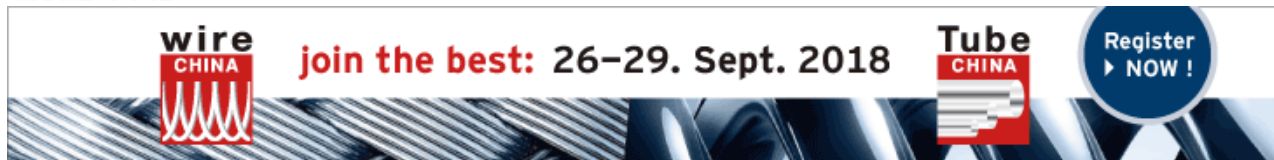


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Buehler Achieves Expanded ISO Accreditation for Hardness Reference Blocks – Now Also Certified for Vickers and Knoop Testing

June 21, 2018

The Buehler Wilson® Reference Block Laboratory in Binghamton, NY/USA, was recently granted an expansion of its accreditation by the American Association for Laboratory Accreditation (A2LA). Previously covering hardness reference blocks for Rockwell and Brinell testing according to ASTM and ISO, and Vickers and Knoop testing according to ASTM, the accreditation now also encompasses the production of reference blocks for hardness testing to Vickers and Brinell in accordance with ISO/IEC 17025. Buehler markets these reference blocks globally in conjunction with its Wilson® range of hardness testers and the DiaMet™ software, but also for use with third-party machines.

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Buehler is now fully certified to ASTM and ISO standards for the calibration of reference blocks for hardness testing to Rockwell, Brinell, Vickers and Knoop. © ITW Test & Measurement GmbH



Calibration of the reference blocks for hardness testing to Rockwell, Vickers, Knoop and Brinell requires compliance with the most exacting requirements. Buehler conducts 100% inspection to ensure that every single test block meets the physical requirements of ASTM in terms of thickness, flatness, parallelism, surface roughness and magnetism. The laboratory then uses specialized hardness testers meeting the stringent requirements of the US-American National Institute of Standards and Technology (NIST) and equipped with load cells made to extremely close tolerances, to calibrate the blocks in its accredited laboratory. Daily in-house verification ensures compliance with these requirements. In addition, the standards also require periodic verifications to be completed by an accredited third-party. Within the framework of such an external verification, the accreditation of the Buehler Wilson® Reference Block Laboratory was now expanded to all common hardness tests to ASTM and ISO.

Matthias Pascher, Hardness Product Manager, said: “During the calibration, hardness readings are taken, and statistics calculated according to the applicable standards. Each test block will get its own certificate, thus ensuring full traceability. After the indent certification, the blocks are engraved with a laser engraver to add a grid (if applicable) and the hardness value with tolerance according to the standards. All hardness test blocks ship with ASTM and ISO certificates. Buehler is the only

globally operating company in the metallographic solutions market that produces and calibrates hardness reference blocks in-house, and at the same time covers the entire spectrum of equipment and consumables.

Scope of Accreditation

The Buehler Wilson® Reference Block Laboratory in Binghamton is accredited to perform calibrations on standardized hardness reference blocks according to the following standards:

- Rockwell Hardness Test Blocks to ASTM E18 and ISO 6508-3
- Rockwell Superficial Hardness Test Blocks to ASTM E18 and ISO 6508-3
- Vickers Test Blocks to ASTM E92 ISO 6507-3
- Knoop Test Blocks ASTM E92 ISO 4545-3
- Brinell Test Blocks ASTM E10 ISO 6506-3

Buehler Test Blocks Available in Rockwell, Vickers, Knoop and Brinell Hardness Scales

Buehler's hardness reference blocks utilize the highest quality material to insure the most uniform and repeatable test blocks available. Buehler's Test Block Calibration Laboratory has the capability to produce and calibrate test blocks for many different hardness scales.

- Rockwell: Regular and Superficial scales
- Vickers Microindentation: Loads from 10gf to 200 gf
- Vickers Low Load: from 200 gf to 5 kgf
- Vickers: Loads from 5kgf to 120kgf
- Knoop Microindentation: Loads from 10gf to 1kgf
- Brinell: Loads from HBW5/750, HBW5/250, HBW10/1000, HBW10/3000, HBW2.5/62.5, HBW2.5/187.5

Further information on the complete line of hardness reference blocks is available within the hardness section of the Buehler website

<https://www.buehler.com/hardness-testing.php>, including a Test Block Application Guide, ready to be downloaded.

Buehler – ITW Test & Measurement GmbH, Esslingen/Germany, established in 1936, has been a leading manufacturer of instruments, consumables and accessories for metallography and materials analysis and also supplies a comprehensive range of hardness testers and hardness testing systems. A tight network of branch offices and dealers means our customers can depend on professional assistance and service around the world. The Buehler Solutions Center in Esslingen and further centers of this kind in Europe and elsewhere can offer all kinds of assistance with application questions or with devising reproducible preparation procedures.

Buehler is part of the Test and Measurement Segment of the US company **Illinois Tool Works (ITW)** with some 100 decentralized business units in 52 countries and around 51,000 employees.

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