National Institute of Standards & Technology

Certificate

Standard Reference Material 1905

Nickel Microhardness Test Block

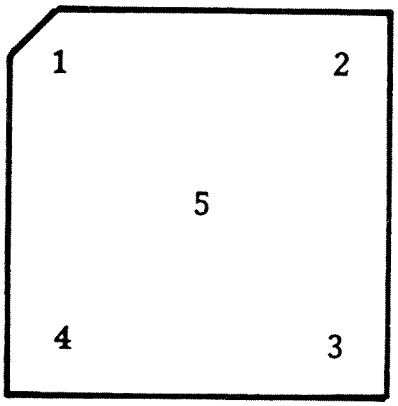
(Knoop)

This Standard Reference Material (SRM) is intended primarily for use in calibrating Knoop-type microhardness testers and is certified for an average Knoop hardness value at 2.94N (300 g-f). SRM 1905 consists of a 1.35-cm square test block of electrodeposited bright nickel (approximately 750 μm thick) on an AISI 1010 steel substrate. The block is mounted in thermosetting epoxy.

Test Block No.: Lot No.:

Calibrated by: *Date:

Positions of Indentations



Load-300 g-f

1.
2.
3.
4.
5.

Average

*The date is used for recordation purposes only. There is no need for periodic recertification. The certified hardness values are stable with proper care and handling of the test block.

The average values are certified to be within ± 5% of the true value.

The Knoop hardness measurement was made according to ASTM Test Methods E384 and B578.

Gaithersburg, MD 20899
March 20, 1992
(Revision of certificate dated 8-18-86)

William P. Reed, Chief
Standard Reference Materials Program

(over)

Hardness values for this SRM were obtained using a calibrated hardness tester. The optical measuring device of the hardness tester was calibrated with a certified stage micrometer while the loading mechanism was calibrated with a miniature precision load cell that had been previously calibrated with NIST certified weights. The indentations are measured at a total magnification of 1000 using a 100X dry lens objective with a numerical aperature of 0.90.

The microhardness test block was fabricated and calibrated in the NIST Materials Science and Engineering Laboratory, Metallurgy Division's Electrodeposition Group, by D.R. Kelley, C.E. Johnson, and P.N. Sharpless.

The overall direction of the technical effort leading to certification of this Standard Reference Material was performed under the direction of D.S. Lashmore, Metallurgy Division: technical coordination was performed by E.C. Soltani, Electrodeposition Group.

The support aspects involved in the original issuance of this SRM were coordinated through the Standard Reference Materials Program by R.W. Seward. Revision of the certificate was coordinated through the Standard Reference Materials Program by N.M. Trahey.