National Institute of Standards & Technology

Certificate

Standard Reference Material 1332a

Certified Coating Thickness Calibration Standard (Nickel on Steel)

This Standard Reference Material (SRM) consists of a 30 × 30 mm coating thickness plate that is designed for calibrating thickness gages of the magnetic type used to measure thickness of nickel on steel. The nickel coating has the magnetic property of a Watts nickel electrodeposit free of iron. The uncoated blank steel substrate, also provided on the card, has the magnetic property of AISI 1010 steel.

The NOMINAL coating thickness for this SRM is 9 μm (0.4 mil).

The certified coating thickness for each specimen is printed on the card upon which the specimen is mounted. This card consists of a steel sheet which is sandwiched between two cardboard layers. This steel sheet gives the appearance to most instruments of an infinitely thick substrate.

The certified coating thickness is certified to be within ±5% of the true thickness. The certified thickness is based on measurements made with instruments that were calibrated with NIST master standards. To further ensure accuracy, the thickness of one of every 25 plates is determined by gravimetric procedures.

CAUTION: Any modification to this SRM, e.g., altering or removing it from the card on which it is mounted, nullifies the certification of the SRM.

NOTE: This SRM should not be left unprotected in a corrosive laboratory environment as some corrosion may occur. If such occurs, the corrosion products often can be removed with a non-abrasive polishing cream without affecting the certification.

Overall direction and coordination of the technical measurements at NIST leading to certification were performed under the direction D. S. Lashmore, of the Metallurgy Division.

The technical and support aspects involved in the preparation, certification, and issuance of this Standard Reference Material were coordinated through the Office of Standard Reference Materials by R.L. McKenzie.

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