

SUBJECT TEST FOR WELD KNOT STRENGTH
OF LEAD WIRES

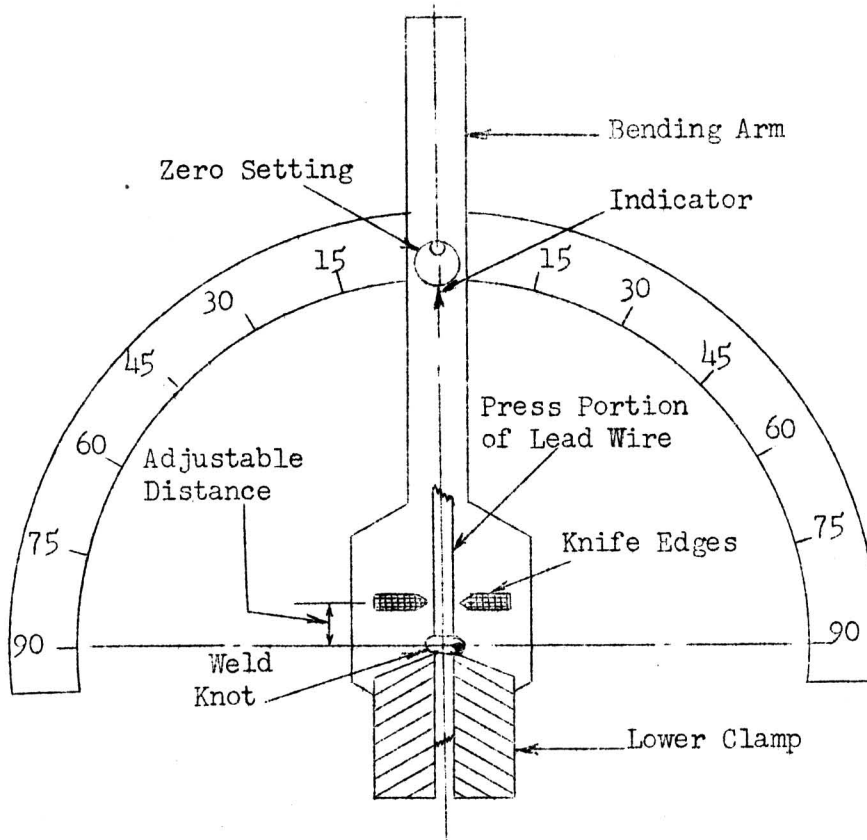
SUPERSEDED DATE

Initially for 3024 NiD-2072D

This test is covered under A.S.T.M. Designation B203-45T. It comprises rigidly clamping a specimen of lead wire immediately below and adjacent to the weld knot, enclosing the upper wire in a pair of knife edges oppositely disposed, and applying a bending force to the wire manually through the lever arm to which the knife edges are attached.

1. APPARATUS The testing apparatus shall consist of: -

- a. Scale. - A semi-circular scale as shown in the figure below graduated in degrees, affixed to the apparatus and marked in such a manner that the angle of bending may be noted. Adjustable stops may be fitted to the scale to limit the angle of bending.
- b. Clamps. - A lower clamp which shall be adjustable to hold rigidly wires of varying diameter. Its height shall be adjustable so that when under test, the center of the weld knot coincides with the axis of rotation. The upper edges of the clamp shall be shaped to a 30-deg. angle. An upper clamp which shall consist of oppositely disposed knife edges, curved to a radius of 0.015 in., and adjustable to fit with an over-all clearance of 0.010 in. over wires of varying diameter. Its position shall be adjustable so that when under test any specified distance may be maintained between its lower edge and the center of the weld knot.
- c. Bending Arm. - A bending arm, to which is attached the upper clamp, which is pivoted at the center of the axis of rotation, and which indicates the angle of bending on the scale.



SUBJECT TEST FOR WELD KNOT STRENGTH
OF LEAD WIRES

SUPERSEDED DATE

2. PROCEDURE

- a. Clamping. - The test specimen shall be inserted into the lower clamp which has been partially closed in such a manner that the lower edge of the weld knot rests on the clamp shoulders. The clamp shall then be tightened in such a manner that no rotational or upward movement of the specimen is possible. Either simultaneously or subsequent to the insertion in the lower clamp, the lead wire shall be fitted into the upper clamp which shall be adjusted to a clearance of 0.010 in. over the lead wire diameter. In the case of a three piece lead wire the test specimen shall be clamped in such a manner that the press portion is inserted between the upper clamp.
- b. Bending. - The bending arm shall be rotated at such a rate that it shall travel through 90 deg. in a period of approximately 1/2 sec. The direction of rotation of the bending shall be reversed immediately upon reaching the specified angle. Then passing through the zero setting, it shall be rotated to the specified angle on the opposite side of the scale.* The first bend shall be counter as the movement from the zero setting to the first reversal. Each subsequent reversal of the bending arm shall be counted as one bend.

STANDARDIZING SECTION
ENGINEERING DEPT.