

MAGNETIC PARTICLE TEST BAR



189838

GENERAL DESCRIPTION

The Magnaflux® Magnetic Particle Test Bar is used as a test piece with artificial flaws to establish field direction and determine adequate current levels using AC or DC current in wet horizontal magnetic particle bench units. The bar contains both fine and coarse defects, surface and subsurface defects, and longitudinal and transverse indications.

As required in some specs, this bar may be used to determine that the MPI procedure has the ability to detect a 1/16 inch long by .006 inch wide by .01 inch deep notch (maximum dimension) oriented 90 degrees to the magnetic flux. It is made of low alloy steel and is filled flush with a non-conducting material to prevent mechanical holding of the magnetic particles.

INSTRUCTIONS

Place bar in wet horizontal unit between head and tailstock. Orient the test bar so that Magnaflux® logo faces the operator. Using the table below, apply the proper current and bath to find indications.

CURRENT & BATH SELECTION				
Direction	Magnetization of Bar	Surface Cracks	Sub-surface Cracks	Min. Current Needed To Find Indication
Longitudinal	Pass current through the bar (Contact Shot)	AC Current	DC Current	AC 160/ DC 400 amps
Transverse	Place bar in coil (Lengthwise)	AC Current	DC Current	AC 450/ DC 780-890 amps

SPECIFICATIONS COMPLIANCE

Meets or exceeds most industrial and military standards for artificial test specimens.

Can be used for system performance test similar to AS5282 ring.

ASTM E 709-08 (Sections 14.2.2 & 20.8.2)

ASTM E1444 (Section 7.1.2)