ANNIS
PRECISION DEMAGNETIZING
AND TESTING EQUIPMENT

ANNIS POCKET MAGNETOMETERS

MAGNETISM IS EVERYWHERE- It is most commonly evident as residual magnetism in iron or steel objects. Determination of the degree of such magnetism is becoming more important for many critical components. Alloy steels, those that are heavily cold worked or heat treated, are especially prone to retain magnetism after having been subjected to strong magnetic fields, such as those created by magnetic chucks, magnetic conveyors, spot welding, magnetized machine tools, or magnetic analysis testing, etc.

RESIDUAL MAGNETISM in steel parts may be readily determined in a few seconds time by checking with an Annis Pocket Magnetometer. Place the lower (test) edge of the Magnetometer Case near or against the object being tested. The Pointer Instantly Deflects to a reading on the scale proportional to the magnetism in the object at that point. The higher the reading, the stronger the magnetic field is. This reading can be compared directly with that produced by other similar objects which are known to be acceptable from a residual magnetism standpoint. Are your parts satisfactorily demagnetized?

MAGNETIC POLARITY of the field being measured is indicated by the direction of pointer deflection on the center zero scale. A plus (+) deflection indicates the test edge of the Magnetometer has been presented to a North (seeking) magnetic pole.

IS DEMAGNETIZING OKAY – Steel components such as video and sound take recorder capstans and guides, that become magnetized, add to background noise and loss of recorded high frequencies. A Pocket Magnetometer will indicate when they are demagnetized to safe levels. Ask for a copy of "Notes On Demagnetizing".

ACCURATE QUANTITATIVE MEASUREMENTS are possible, even under widely varying temperature conditions. As a matter of convenience, instrument calibration is correct at normal room temperatures, but when the occasion demands, readings may be taken at extremes of temperature with Model 25 instruments by applying the indicated percentage corrections to the readings for ambient (instrument) temperature in accordance with the straight-line graph.

CARE SHOULD BE EXCERCISED in handling your Pocket Magnetometer; it should not be dropped. Although quite stable under reasonable conditions of handling, scale calibration can be changed by accidental exposure to strong A.C. magnetic fields or by strong unidirectional fields that would tend to deflect the pointer considerably off scale.

CALIBRATION IS TRACEABLE TO N.B.S. and N.I.S.T. on all of our Model 25 instruments. Serialization and certification is available at an additional cost.

POCKET MAGNETOMETERS ARE HANDY – fast and easy to sue, as well as being relatively inexpensive. The quantitative information secured can be extremely valuable to personnel in the tool room, stock room, inspection, engineering and laboratory, as well as in many production processes.

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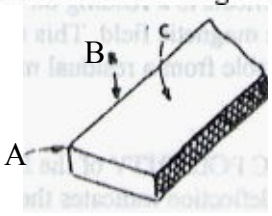
DUAL PURPOSE, TWO COLOR SCALE makes the Model 25 Magnetometer more useful. The upper "Black" scale (the one more usually used) reads directly in gauss of a uniform magnetic field oriented parallel with the centerline of the instrument scale. The lower "Red" scale is used in determining the *magnitude and direction* of an unknown magnetic field by merely orienting the instrument for maximum reading. When shown in the "Red" scale, at such a maximum reading, direction of the measured field is parallel with the instrument pointer and magnitude in gauss.

SENSITIVE INSTRUMENTS AVAILABLE - The one gauss full scale, Model 25 instrument, is so sensitive it will deflect approximately half-scale in the earth's magnetic field. The half gauss (0.5-0-0.5) full-scale instrument is twice as sensitive and will indicate changes of field strength in the order of 10 milligauss.
On request, we can furnish still more sensitive Magnetometers to determine local magnetic anomalies as caused by shallowly buried "curb boxes" or other magnetic materials, etc.

MAGNETOMETER READINGS ACCURATELY INDICATE magnetic field strength in the area of the movement staff. It does not hold, however, that readings may be compared directly with those taken with any other type instrument, except under uniform magnetic field conditions. Variations in staff spacing from the work or the surface shape of steel parts being measured will affect Magnetometer readings. Surface shape also affects the retention of "magnetic dirt" and cleaning characteristics of such parts. As the sharpness of the surface shape increases ("A" in sketch), the local concentration of magnetic flux causes increased retention of magnetic dirt and particles. Therefore, place surfaces ("C" in sketch) may give somewhat higher readings that corners, points, or ends of small bars without causing increased cleaning troubles.



NOTE TO MAGNETOMETER USERS

Whenever the instrument pointer fails to properly return to center zero, it is indication that it has been exposed to a very high magnetic field, in excess of 400 gauss, as from permanent or electro magnets or demagnetizing equipment.

Accidentally dropping the instrument onto a hard surface often cracks the pivot jewels, creating unwanted friction and sluggish action.