

Notes on measuring residual magnetism



- 1- If your demagnetizing application is critical, you need to use a meter that:
 - a. Measures close to the surface. The Maurer Magnetics M-Test LL measures at 0.5mm (0.020")
 - b. That is sensitive to small areas of flux leakage (fine pole) as is often found in hard materials
 - c. That has a scan mode with peak measurement hold-feature and LED indicator.

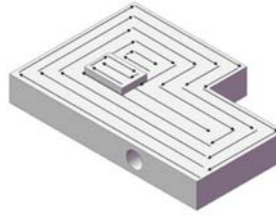
- 2- Determine the effect of magnetism in your environment.
 - a. Hold the probe in air, away from any surface and twist and rotate the probe to all possible orientations. Note the high reading and its associated compass position. This is the effect of the Earth's field at your location. The measurement is influenced by the structure you are standing in (power lines, steel beams, reinforced concrete, machinery).
 - b. Hold the probe on the end of a test piece and move the test piece in all the positions that you moved the probe. Note the low and high measurements and corresponding direction.
 - c. You will see that the test piece picks up the Earth's magnetic field and adds its value to that of the test piece.
 - d. This value must be considered when measuring magnetic fields. The lowest measurement should be perpendicular to this (East-West vs. North-South). If the value is significant, consider



using a Zero Gauss Chamber for measuring.

- 3- Place the probe on the surface of the test piece, with the LED pointed up, and scan the surface with the probe in close contact. Scan the parts slowly and carefully with the probe of the M-Test LL. Circle slowly at spots with higher magnetization and try to find the maximum value. Make sure the probe is flat on the surface and touching at the edges. It is recommended that the edges be scanned separately from the remainder of the surface.

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- 4- Typically, people only look at the ends of the part. But now we have a tool that allows us to look closer and find small areas of flux leakage caused by magnet hard spots in the material. These small spots can have significant magnetic flux leakage that will create a problem in cleaning, plating, etc.
- 5- It is helpful to visualize the detected magnetic flux leakage. The Maurer Magnetic Viewer B-1022 is very helpful for this.

