



Superior Joining Technologies, Inc.

A Precision Welding Laboratory

AS 9100 Registered

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Magnetic Particle Inspection (MT)

Magnetic Particle Inspection (Magnetic Testing or MT) is a non-destructive method for detecting defects in ferrous metals. A magnetic field created with AC or DC current is

applied through the material, causing distortion in the magnetic flow at a surface or near-surface flaw.



Fine magnetic iron oxide particles, coated with a fluorescent dye and held in a suspension liquid, are attracted to the distortion in the magnetic field in the area of the defect and hold on to the edges of the defect to reveal it as a build-up of particles. The photograph at right shows an airplane crank-shaft being viewed with ultra-violet light (black light) as part

of the magnetic testing process. The zoomed-view shows the presence of fatigue cracks on the plate around the crank shaft.