

## Flat Magnetizing Coil

A patented design accessory for non-contact inspection for a variety of parts from the leader in magnetic particle inspection.



**A** new and innovative non-contact method of magnetic particle inspection, the Magnaflux® Flat Magnetizing Coil allows for the quick and easy processing of several small parts at the same time.

- Takes the place of a contact shot
- Process many parts simultaneously
- Use with any magnetic particle unit or power pack
- Can inspect parts that are painted or coated

MAGNAFLUX®

# Flat Magnetizing Coil

## Technical Specifications\*

Dimensions: 20" L x 7" W x 3" H  
 Unit Weight: 60 lbs.  
 Maximum Current: 2,000 amps AC or DC  
 \*other sizes available upon request

## Expected Performance Data

At 750 amps HWDC: 250 G min\*  
 At 1350 amps AC: 250 G min\*  
 \* measured at surface of unit

## Features and Benefits

The Magnaflux® Flat Magnetizing Coil is a non-contact method of magnetic particle inspection. Without the need for individual part clamping, it can be used to quickly process many small parts, such as fasteners, simultaneously.

- Magnetizes without passing current through the parts
- Accommodates a variety of sizes and shapes without adjustments
- Can inspect parts that are painted or coated
- Magnetizes and demagnetizes with either AC or DC currents
- No part surfaces hidden by contact points
- Can be used with any magnetic particle power pack or unit
- Holding fixtures available to keep parts in proper orientation

## Theory of Operation

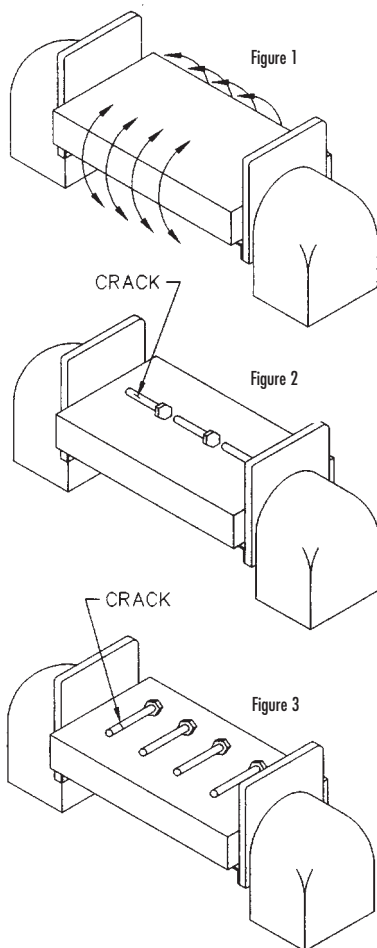
The Flat Magnetizing Coil provides a convenient method of generating a field in ferromagnetic parts. Current is passed through the unit by connecting a power supply to either end of the unit. The magnetic field is generated as shown (see Figure 1).

## Operating Instructions

To find longitudinal cracks in the parts, orient the parts with their axes parallel to the length of the Flat Magnetizing Coil (see Figure 2). Depending on the L/D ratio of the parts, holding fixtures (not included) may be required to keep the parts in this orientation.

To find transverse cracks in the parts, orient the parts with their axes perpendicular to the length of the Flat Magnetizing Coil (see Figure 3).

Results are best when the wet continuous method of inspection is utilized with the Flat Magnetizing Coil. Holding fixtures may be needed to raise the part slightly from the coil and allow magnetic particle bath to get to the entire part.



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