

***Supplement to Recommended Practice SNT-TC-1A (Book B)***  
***Magnetic Particle Testing Method (Q&A Book)***  
**Second Edition, Second Printing**

**Text Corrections**

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The following text corrections apply to the second printing of *Supplement to Recommended Practice SNT-TC-1A (Book B): Magnetic Particle Testing Method (Questions & Answers Book)*, second edition. Subsequent printings of the document will incorporate the corrections into the published text.

**Level I**

**Page 3:** Question 27 should be changed as follows:

27. A metal that is difficult to magnetize is said to have:

- a. high permeability
- b. low permeability
- c. low coercive force
- d. low retentivity

Refs: C.56; E.44

Answer b is correct.

**Page 4:** Question 34 should be changed as follows:

34. Which of the following is the most effective method for the detection of ~~subsurface~~ near-surface defects?

- a. dry residual method using DC with surge
- b. wet continuous method using half-wave rectified current
- c. wet residual method
- d. dry continuous method using half-wave rectified current with prods

Ref: C.117

Answer d is correct.

**Page 5:** Question 38 should be changed as follows:

38. When there is absolutely no pattern or distribution of magnetic particles on the part, the possible cause is that:

- a. the amperage setting is too high
- b. the amperage setting is too low
- c. the particle bath strength is too high
- d. the part is made of steel with high retentivity

Ref: A.64

The correct answer should be: b.

**Page 6:** Question 52 should be changed as follows:

52. What equipment is used to determine if a part has been demagnetized?

- a. a magnet on the part
- b. a field indicator
- c. a survey meter
- d. careful observation for clinging magnetic particles

Ref: C.289

Answer b is correct.

**Page 10:** Questions 84 and 85 should be changed as follows:

84. Magnetic particle testing is a nondestructive testing method for detecting discontinuities in magnetizable material. This method can detect:

- a. surface discontinuities only
- b. subsurface discontinuities only
- c. surface and ~~subsurface~~ near-surface discontinuities
- d. discontinuities at surface and subsurface of any depth

Refs: C.8; E.2, 49

Answer c is correct.

85. Which of the following statements is true of magnetic particle testing?

- a. it cannot be utilized to inspect through coatings
- b. it can be applied only to detect surface defects
- c. it can be applied only to detect subsurface defects
- d. it can be applied to detect surface and ~~subsurface~~ near-surface discontinuities in ~~ferrous~~ ferromagnetic material

Refs: A.66-68; C.8

Answer d is correct.

The answers to the following Level I questions should be corrected as follows:

1b; 2a; 38b; 48d; 49b; 66a

## Level II

**Page 15:** Question 31 should be corrected as follows:

31. Which of the following is the most common current method used for preserving and documenting magnetic particle indications?

- a. digital photography
- b. color-tinted tape
- c. color-tinted lacquer
- d. all of the above

Refs: A.407-412; C.243

The correct answer should be: a.

**Page 20:** Question 76 should be corrected as follows:

76. Demagnetization would most likely be required ~~if~~ when:

- a. the material has low retentivity
- b. the object is to be electric arc welded
- c. the material has low reluctance
- d. heat treatment is to be carried out after testing

Ref: C.279

Answer b is correct.

The answers to the following Level II questions should be corrected as follows:

31a (when changed per above); 51a; 53d; 62d; 71d

## Level III

**Page 23:** The heading should be corrected as follows:

### Level ~~III~~ III Questions

**Pages 24–30:** Questions 9–60 will be renumbered as 8–59 in the next printing. The answers, as they correspond with each question in this printing, are correct.

**Page 27:** Question 35 should be changed to read:

35. The least important factor below that should be considered when selecting a method of magnetization to detect subsurface discontinuities is:

- a. available equipment
- b. configuration of the part
- c. cost of the equipment
- d. type of materials the part is made from

Ref: C.216

Answer c is correct.

**Page 28:** Questions 43 and 45 should be changed as follows:

43. Small parts requiring demagnetization should be:

- a. loaded in baskets in a single layer and passed through an alternating current coil
- b. loaded in a steel basket for better field distribution
- c. processed through a demagnetization cycle one at a time
- d. demagnetized after assembly to ensure complete demagnetization of the entire assembly

Ref: A.314

The correct answer should be: a.

45. An effective method for testing hardened steel ball bearings is:

- a. along one axis using a coil
- b. two head shots along the X and Y axes
- c. two shots using a coil at the X and Y axes
- d. induced current shots along X, Y, and Z axes, ~~rotating 360 degrees during each shot~~ with controlled rotation between each positioning

Ref: A.349-350

Answer d is correct.

**Page 29:** Question 47 should be changed as follows:

47. A discontinuity caused by a welding operation is:

- a. creep crack
- b. segregation
- c. machining tear
- d. lamellar tearing

Ref: C.307

Answer d is correct.

The answer to the following Level III question should be corrected as follows:

43a (when changed per above)