

Supplement to Recommended Practice SNT-TC-1A (Q&A Book): Magnetic Particle Testing Method

Text Corrections

The following text corrections apply to the first printing of *Supplement to Recommended Practice SNT-TC-1A (Q&A Book): Magnetic Particle Testing Method, 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:
- high permeability.
 - low permeability.
 - low coercive force.
 - low retentivity.

Ref: C.45

Answer b is correct.

Page 4: Questions 34 and 38 should be changed as follows:

34. Which of the following is the most effective method for the detection of near surface defects?
- Dry residual method using DC with surge.
 - Wet continuous method using half-wave rectified current.
 - Wet residual method.
 - Dry continuous method using half-wave rectified current with prods.

Ref: C.207

Answer d is correct.

38. When there is absolutely no pattern or distribution of magnetic particles on the part, the possible cause is that:
- the amperage setting is too high.
 - the amperage setting is too low.
 - the particle bath strength is too high.
 - the part is made of steel with high retentivity.

Ref: A.64

Answer b is correct.

Page 6: Questions 52 and 53 should be changed as follows:

52. What equipment is used to determine if a part has been demagnetized?
- a magnet on the part
 - a field indicator
 - a survey meter
 - careful observation for clinging magnetic particles

Ref: C.302

Answer b is correct.

53. Which of the following is most often used for dry magnetic particle inspection?
- a. full cycle direct current
 - b. half wave ~~rectified alternating~~ direct current
 - c. high voltage, low amperage current
 - d. direct current from electrolytic cells

Ref: C.202

Answer b is correct.

Page 11: The answers to the following Level I questions should be corrected as follows:

- 1. b
- 2. a
- 38. b
- 48. d
- 49. b
- 66. a
- 85. a

Level II

Page 17: 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. hand drawn sketch
 - b. color-tinted tape
 - c. color-tinted lacquer
 - d. digital photography

Ref: C: 284

Answer d is correct.

Page 19: Question 56 should be changed to read:

56. The lines of force that form a path around a crack in a ring magnet are called:
- a. ~~leakage flux~~ leakage
 - b. field strength
 - c. magnetic lines
 - d. longitudinal field

Ref: C.2,17

Answer a is correct.

Page 21: Questions 71 and 76 should be corrected as follows:

71. Magnetic field strength is measured in:
- a. tesla
 - b. gauss
 - c. ~~oersted~~
 - d. webers/m²
 - e. ampere/meter

Ref: C.302

Answer d is correct.

76. Demagnetization would most likely be required when:
- the material has low retentivity.
 - the object is to be electric arc welded.
 - the material has low reluctance.
 - heat treatment is to be carried out after testing.

Ref: C.30

Answer b is correct.

Page 23: The answers to the following Level II questions should be corrected as follows:

51. a
53. d
62. d
71. d

Page 25: Question 6 should be changed to read:

6. The concentration of the solid content ~~of~~ in a suspension of magnetic particles is measured by:
- weighing the suspension
 - soaking the solids in benzol
 - measuring the pull on a magnet
 - permitting the solids to settle out of suspension

Ref. A.261-263

Answer d is correct.

Page 26: Delete Question 8.

Page 29: Questions 35 and 40 should be changed to read:

35. The least important factor below that should ~~not~~ be considered when selecting a method of magnetization to detect subsurface discontinuities is:
- available equipment
 - configuration of the part
 - ~~skill of the operator of~~ cost of the equipment
 - type of materials the part is made from

Ref: C.233

Answer c is correct.

40. The magnetic lines of flux ~~or flux~~ in a permanent magnet:
- in all cases produce a longitudinal field
 - enter the south pole and leave through the north pole
 - flow from the north pole through the magnet to the south pole
 - change direction 60 times a second with the magnetizing current

Ref: C.12

Answer b is correct.

Level III

Page 30: 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.

Answer d is correct.

Ref: C.86

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