

CBIP Examination Paper - Liquid Penetrant Inspection
Level 1 Specific

- 1 The written procedure (as per AS 2062) states that the maximum water pressure allowed during the washing/removal stage is:
- A. 40 kPa
 - B. 104 kPa
 - C. 1084 kPa
 - D. 276 kPa
- 2 It is recommended that the time taken during the removal stage of the penetrant process be held to a minimum, this is to:
- A. Keep the inspection time down to an acceptable level
 - B. Stop the item from getting too hot
 - C. Prevent over washing
 - D. Stop the item from getting too cold
- 3 Which of the following would have to be included in a level 1 written procedure?
- A. Penetrant manufacturers name
 - B. Inspection area ambient light requirements
 - C. Inspection area ambient temperature requirements
 - D. Penetrant colour
- 4 When evaluating an indication by wiping and redeveloping, the new development time shall be:
- A. A minimum of 2 minutes
 - B. Only half the original development time
 - C. Twice the original development time
 - D. At least as long as the original development time
- 5 Small round indications in the middle of a weld bead are more likely caused by:
- A. Slag inclusions
 - B. Porosity
 - C. Undercut
 - D. Crater Cracks
- 6 Type 2 (II) penetrants will generally produce:
- A. A red indication on a red background
 - B. A black indication on a white background
 - C. A red indication on a white background
 - D. A white indication on a black background

- 7 For a given penetrant material which of the following forms would be considered as having the greatest flammability hazard?
- A. Solid
 - B. Liquid
 - C. Atomized spray
 - D. All of the above would have the same flammability rating
- 8 The level 1 instruction sheet specifies that the acceptance criteria is to be as per AS2062 Appendix B, class 3. The welded plate you are inspecting is 4 mm thick, which of the following would be unacceptable?
- A. 1 rounded indication 0.9 mm in dia
 - B. 2 rounded indications, both 0.5 mm in dia
 - C. 2 linear indications, each 1.0 mm long separated by 1.5mm
 - D. All of the above
- 9 When carrying out a "system performance test" as per As 2062, which of the following is true?
- A. The results from the defect standard shall be compared to the indications obtained from unused samples of the same material
 - B. This test applies to penetrant in aerosol containers
 - C. Both A and B are correct
 - D. Neither A or B are correct
- 10 When spraying a method "D" emulsifier onto the part during the removal stage, the maximum concentration shall be:
- A. 5%
 - B. 10%
 - C. 20%
 - D. 50%
- 11 Describe two (2) techniques that could assist with the interpretation of suspected cracking in an aluminium casting that exhibits a high background during the inspection stage
- 12 Apart from spraying the penetrant on the part, what other acceptable ways are there to apply the penetrant?
- 13 In general terms briefly explain the difference between Iron and Steel