

WELDING INSPECTION STEELS - COURSE REF. WIS 5

MULTIPLE-CHOICE QUESTION PAPER (MCQ.001)

Name : ~~XXXXXXXXXX~~.....

Answer all questions.

- A1. When "hydrogen control" is specified for a manual metal arc welding project the electrode would normally be:
- (a) Cellulosic ?
 - (b) Iron oxide ?
 - (c) Acid ?
 - (d) Basic ?
- A2. You would with certainty recognise a hydrogen controlled flux covered electrode from its :
- (a) Colour ?
 - (b) Length ?
 - (c) Trade Name ?
 - (d) AWS/BS639 Code Letter ?
- A3. When manual metal arc welding is being carried out on an open construction site, which group of welders are the most likely to require continuous monitoring ?
- (a) Concrete shuttering welding teams ?
 - (b) Pipe welding team ?
 - (c) Plater welders ?
 - (d) Plant maintenance welders ?

- A4. You notice manual metal arc electrodes, stripped of flux, are being used as filler wire, for TIG welding. You would object because :
- (a) It is too expensive ?
 - (b) The wire would be too thick ?
 - (c) The weld metal composition may be wrong ?
 - (d) The wire is too short ?
- A5. When open site working, serious porosity in metal arc welds is brought to your attention. What would you investigate ?
- (a) Electrode type ?
 - (b) Power plant type ?
 - (c) Electrode storage ?
 - (d) Day temperature ?
- A6. The steel composition in a structural contract is changed from 0.15% carbon, 0.6% manganese, to 0.2% carbon, 1.2% manganese. Might this influence the incidence of :
- (a) Porosity ?
 - (b) Cracking in the weld area ?
 - (c) Undercut for fillet welds ?
 - (d) Lack of root fusion defects ?
- A7. One of the following alloys is non-magnetic. Which ?
- (a) 4.0% Chromium molybdenum
 - (b) 12.0% Chromium
 - (c) Austenitic Stainless Steel
 - (d) 9.0% Nickel Steel

- A8. When TIG welding Austenitic stainless steel pipe, Argon gas backing is called for.
This is to :
- (a) Prevent oxidation ?
 - (b) Prevent underbead cracking ?
 - (c) Prevent porosity ?
 - (d) Control the penetration bead shape ?
- A9. Pre-heating a Carbon steel manual metal arc welding is carried out to minimise the risk of :
- (a) Scattered porosity ?
 - (b) Worm hole porosity ?
 - (c) Parent metal cracking ?
 - (d) Lack of penetration ?
- A10. In UK practice, BS499 Part 2 specifies that the drawing dimension quoted for a fillet weld is the :
- (a) Leg length ?
 - (b) Actual throat thickness ?
 - (c) Weld width ?
- A11. For open site manual metal welding the following equipment is available. Which would you choose for safe working ?
- (a) Single operator transformer ?
 - (b) Multi operator transformers ?
 - (c) AC/DC composite power unit ?
 - (d) Diesel engine driven motor generator ?

A12. If submerged arc welding is to be used to make butt welds, which would you be most critical of :

- (a) The root gap tolerance ?
- (b) The angle of preparation ?
- (c) The root face width ?
- (d) The gas cut finish ?

A13. During CO₂ welding, the arc length is most likely to be affected by :

- (a) The wire diameter ?
- (b) The current return connections ?
- (c) The gas flow rate ?
- (d) The torch to work angle ?

A14. Preheating for arc welding applies to :

- (a) Assembly welding only ?
- (b) Assembly and tack welding ?
- (c) Joints over 25mm thick only ?
- (d) Cruciform welds only ?

A15. You see a welder using an oxy-acetylene flame with a long feathered inner cone. What would be the effect of this on a carbon steel.

- (a) The weld could be hard and brittle ?
- (b) The weld metal could be too soft ?
- (c) There will be no effect on the weld ?
- (d) The weld will have undercut ?

A16. A welder qualification test is to verify :

- (a) The skill of the welder ?
- (b) The quality of the materials ?
- (c) The non-destructive test procedures ?
- (d) The manufacturing methods ?

A17. A fabricating procedure calls for fillet welds to be "blended in" by grinding. This is to influence :

- (a) H.A.Z. cracking ?
- (b) Fatigue life ?
- (c) Residual stress ?
- (d) Yield strength ?

A18. Bend test specimens have been taken from a 25mm thick carbon steel butt weld. Which would show lack of inter-run fusion :

- (a) Side bend ?
- (b) Root bend ?
- (c) Face bend ?
- (d) Guided bend ?

A19. Lamellar tearing has occurred in a steel fabrication. BEFORE welding could it have been found by :

- (a) X-ray examination ?
- (b) Dye penetrant ?
- (c) Ultrasonic inspection ?
- (d) It would not have been found by any inspection method ?

A20. You are to oversee the arc welding of some machined fittings and find they are cadmium plated. Would you :

- (a) Permit it to proceed ?
- X (b) Permit it to proceed with fume extraction ?
- ✓ (c) Stop the operation at once ?
- (d) Advise the welder to drink milk and proceed ?