Unit 6 - Week 5

Assignment 5

The due date for submitting this assignment has passed. As per our records you have not submitted this assignment. Due on 2019-04-03, 23:59 IST.

1) Typical microstructure of HSLA steel consists of

- [ ] Coarse ferrite and pearlite
- [ ] Fully austenitic structure
- [ ] Fine ferrite, pearlite, bainite/martensite
- [ ] Ferrite and austenite

No, the answer is incorrect. Score: 0

Accepted Answers: Fine ferrite, pearlite, bainite/martensite

2) With increase in thickness of HSLA plates, the minimum pre-heat temperature should

- [ ] Increase
- [ ] Decrease
- [ ] First increase then decrease
- [ ] Remains constant

No, the answer is incorrect. Score: 0

Accepted Answers: Increase

3) Steels in Q and T conditions typically have

- [ ] Bainitic & ferritic microstructure
- [ ] Bainitic & austenitic microstructure
- [ ] Bainitic & martensitic microstructure
- [ ] Ferritic & austenitic microstructure

Score: 0

Accepted Answers: Bainitic & martensitic microstructure
5) Jominy quench test can be used to

- Determine hardenability  
- Estimate extent of hardness variation in weldments  
- Determine impact toughness  
- Both a and b

No, the answer is incorrect.  
Score: 0

Accepted Answers:  
Both a and b

6) With increase in tempering temperature, in case of Q&T steel welded joints, the hardness

- Decreases continuously  
- Increases continuously  
- Decreases up to a certain temperature then increases due to carbide formation and then decreases again  
- Increases up to a certain temperature then decreases due to carbide formation and then increases again

No, the answer is incorrect.  
Score: 0

Accepted Answers:
Decreases up to a certain temperature then increases due to carbide formation and then decreases again

7) The most favourable microstructure in welding of Q&T steels is

- Ferrite  
- Ferrite + upper Bainite  
- Untempered Martensite  
- Ferrite+Lower Bainite+Tempered martensite

No, the answer is incorrect.  
Score: 0

Accepted Answers:
Ferrite+Lower Bainite+Tempered martensite

8) Use of electron beam welding on Q&T steels is limited to 0.5 inch thick plates due to

- Embrittlement  
- Martensitic transformation in HAZ  
- Martensitic transformation in weld zone  
- All of above

No, the answer is incorrect.
9) The important process parameters for air plasma cutting process are

- Current, air pressure and welding speed
- Current, voltage and welding speed
- Current, electrical resistance and welding speed
- All of above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Current, air pressure and welding speed

1 point

10) Gas cutting is not used for Q&T steels due to

- Low heat input
- High cooling rate
- Deterioration of mechanical properties such as yield strength and notch toughness
- All of above

No, the answer is incorrect.

Score: 0

Accepted Answers:

Deterioration of mechanical properties such as yield strength and notch toughness

1 point