Assignment No. 11

The due date for submitting this assignment has passed. Due on 2019-10-16, 23:59 IST. As per our records you have not submitted this assignment.

1) Densification of flame sprayed coatings can be achieved through
   - Compaction technique
   - Iso-static pressing at high temperature
   - Rolling
   - All of the above
   
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   All of the above

2) Densification of flame sprayed coatings by compaction leads to
   - Grain coarsening
   - Increase in pore size
   - Fracturing of inclusions
   - All of the above
   
   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
   Fracturing of inclusions

3) The gases used in HVOF process include

https://onlinecourses.nptel.ac.in/noc19_me69/unit?unit=75&assessment=105
Surface modification techniques:
- Improving the performance of flame spray coating (unit? unit=75&lesson=76)
- HVOF and Detonation spraying (unit? unit=75&lesson=77)
- Cold spraying, arc spraying (unit? unit=75&lesson=78)
- Plasma spraying, electroplating, electroless plating (unit? unit=75&lesson=79)
- Surface roughness and thickness I (unit? unit=75&lesson=80)

Quiz:
Assignment No. 11 (assessment? name=105)
Solution for Assignment No. 11 (unit? unit=75&lesson=119)

Week 12

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I. Oxygen
II. Acetylene
III. Compressed air
IV. Nitrogen

- I & II
- I, II & III
- II & III
- I, II, III & IV

No, the answer is incorrect.
Score: 0
Accepted Answers:
I, II, III & IV

4) The coating material (like Ni-Co-Cr-W-C) is not completely melted during detonation spray process due to

- Very low velocity of coating material
- Very low temperature attained during the process
- Less exposure time during spraying
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Less exposure time during spraying

5) Cold spraying process involves

- High kinetic energy of particles and heating of gas up to 300-400°C
- Low kinetic energy of particles and heating of gas up to 3000-4000°C
- High kinetic energy of particles and heating of gas up to 3000-4000°C
- Low kinetic energy of particles and no heating of gas

No, the answer is incorrect.
Score: 0
Accepted Answers:
High kinetic energy of particles and heating of gas up to 300-400°C

6) In cold spraying, the mechanism of coating of constituent particles on the substrate material is

- Mechanical interlocking
- Plastic deformation of particles through high energy impact
- Both a and b
- Fine atomized molten metal drops are sprayed over the substrate

No, the answer is incorrect.
Score: 0
Accepted Answers:
Both a and b

7) During Electroless plating, the rate of deposition will be highest at solution temperature of

- -30°C
- 30°C
- -60°C
- 60°C

No, the answer is incorrect.
Score: 0
Accepted Answers:
60°C

8) The coating process which does not use electrode is

- Carburizing
- TIG remelting
- Plasma arc spray process
- Flux cored arc welding

No, the answer is incorrect.
Score: 0
Accepted Answers:
Carburizing

9) Chemical composition of the modified surface layer primarily affects

- Phases and nature of micro-constituents
- Mechanical properties
- Corrosion resistance
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
All of the above

10) Prolonged exposure of modified surface of steel at high temperature (near lower critical temperature) can cause

- Grain refinement
- Remelting and solidification of modified surface
- Spheroidization
- All of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
Spheroidization