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reviewer4@nptel.iitm.ac.in ▾

NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » **Fundamentals of Surface Engineering: Mechanisms, Processes and Characterizations (course)**

Announcements (announcements)

About the Course (https://swayam.gov.in/nd1_noc19_me69/preview) Ask a Question (forum)

Progress (student/home) Mentor (student/mentor)

Unit 11 - Week 10

Course outline

How to access the portal

Week 1

Week 2

Week 3

Week 4

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Week 6

Week 7

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Week 9

Week 10

- Surface modification techniques:

Assignment No.10

The due date for submitting this assignment has passed. **Due on 2019-10-09, 23:59 IST.**
As per our records you have not submitted this assignment.

1) Flux cored arc welding uses

1 point

- Tubular electrode with flux coated on its outer surface
- A non-consumable tubular electrode
- Tubular electrode with flux filled inside the tube
- A bare consumable electrode using Ar/He as shielding gas

No, the answer is incorrect.

Score: 0

Accepted Answers:

Tubular electrode with flux filled inside the tube

2) A surface modification for improvement of corrosion resistance will be observed when

1 point

- AISI 316 stainless steel surface layer applied on mild steel substrate
- Surface layer of mild steel deposited on AISI 316 stainless steel substrate
- Surface layer of mild steel deposited on AISI 304 stainless steel substrate
- All of above

No, the answer is incorrect.

Score: 0

Accepted Answers:

AISI 316 stainless steel surface layer applied on mild steel substrate

3) Pre-heating of filler wire during hot wire GTAW facilitates

1 point

Weld surfacing II (unit? unit=68&lesson=69)

Surface modification techniques: Weld surfacing III (unit? unit=68&lesson=70)

Surface modification techniques: Laser cladding (unit? unit=68&lesson=71)

Surface modification techniques: Principle of thermal spraying (unit? unit=68&lesson=72)

Surface modification techniques: Flame spraying (unit? unit=68&lesson=73)

Quiz : Assignment No.10 (assessment? name=104)

Solution for Assignment No. 10 (unit? unit=68&lesson=118)

Week 11

Week 12

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- Less arc heat for melting of filler
- Faster melting of filler
- Increased deposition rate
- All of above

No, the answer is incorrect.
Score: 0

Accepted Answers:
All of above

4) In non-transferred plasma arc welding technique for surface modification **1 point**

- Substrate is connected to positive terminal to power source
- Substrate is connected to negative terminal to power source
- Substrate is not a part of electric circuit
- Arc is struck between substrate and electrode

No, the answer is incorrect.
Score: 0

Accepted Answers:
Substrate is not a part of electric circuit

5) The preferred overlap during laser cladding to ensure proper continuity of bonding is **1 point**

- 0%
- 30%
- 80%
- 100%

No, the answer is incorrect.
Score: 0

Accepted Answers:
30%

6) The correct arrangement in descending order of energy densities during laser based processing for different applications is **1 point**

- Melting, Heating, Machining
- Machining, Melting, Heating
- Heating, Melting, Machining
- Machining, Heating, Melting

No, the answer is incorrect.
Score: 0

Accepted Answers:
Machining, Melting, Heating

7) The process parameters in laser cladding are **1 point**

- Power and scanning speed
- Arc voltage, current and scanning speed
- Current and arc gap
- Arc gap, arc voltage and scanning speed

No, the answer is incorrect.
Score: 0

Accepted Answers:
Power and scanning speed

8) Under the influence of heat during thermal spraying, the feedstock material particles can undergo **1 point**

- Complete melting
- Thermal softening
- Partial melting
- All of above

No, the answer is incorrect.

Score: 0

Accepted Answers:

All of above

9) The type of defect NOT typically observed in thermal spraying is

1 point

- Inclusions
- Pores
- Cracks
- Misrun

No, the answer is incorrect.

Score: 0

Accepted Answers:

Misrun

10) In a sound thermal spray coating, the intra-splat structure generally consists of

1 point

- Pores
- Cracks
- Metallurgical bond
- Both a and b

No, the answer is incorrect.

Score: 0

Accepted Answers:

Metallurgical bond