

Unit 7 - Week 5 : Advanced Abrasive Machining Processes

Course outline

How does an NPTEL online course work?

Week 0: Prerequisite

Week 1: Introduction to Conventional Abrasive Processes

Week 2: Sustainable Grinding Process

Week 3: Honing, Lapping and Super Finishing.

Week 4 : Conventional Abrasive Process and Surface Integrity in Abrasive Process

Week 5 : Advanced Abrasive Machining Processes

Quiz : Assignment 5

Lec. 1: Abrasive Jet Machining (AJM)

Lec. 2: Abrasive Water Jet Machining (AWJM)

Lec. 3: Ultrasonic Machining (USM)

Lec. 4: EDM, Wire-EDM, EDG, EDDG, AW-EDG

Feedback form

Week 6 : Hybrid Abrasive Machining Processes

Week 7 : Advanced Abrasive Finishing Processes-1

Week 8 : Advanced Abrasive Finishing Processes-2

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Assignment 5

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2020-03-04, 23:59 IST.

1) For compressing water, _____ is used in AWJM.

1 point

- a) Compressor
- b) Intensifier
- c) Condenser
- d) Float valve

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Intensifier

2) Which type of carrier medium is used in abrasive jet machining?

1 point

- a) Oil
- b) Water
- c) Air
- d) Grease

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Air

3) Which of the following material cannot be machined with EDM?

1 point

- a) Silicon
- b) Stainless Steel
- c) Aluminum
- d) Graphite

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Silicon

4) In abrasive jet machining, the term "mass ratio" refers to the ratio of

1 point

- a) Volume flow rate of abrasive / Volume flow rate of carrier gas
- b) Mass flow rate of carrier gas / Mass flow rate of abrasive
- c) Mass flow rate of abrasive / Mass flow rate of carrier gas along with abrasive
- d) Volume flow rate of carrier gas / Volume flow rate of abrasive

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Mass flow rate of abrasive / Mass flow rate of carrier gas along with abrasive

5) Abrasive jet machining can be used for machining of

0 points

- a) Cubic Boron Nitride
- b) Low carbon steels
- c) Cast Iron
- d) Silicon Carbide

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Low carbon steels

6) What are the functions of nozzle in AWJM?

1 point

- a) Maintaining the concentration of abrasives in water
- b) Mixing water and abrasive particles
- c) Forming high velocity water jet
- d) Both b & c

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Both b & c

7) The difference between EDG and EDDG is

1 point

- a) SiC abrasive particles are used in EDG instead of diamond as in case of EDDG
- b) Abrasive particles are suspended in dielectric fluid in EDG which is not true in EDDG
- c) Diamond abrasives are used in EDG but no abrasives are used in case of EDDG
- d) A disk without abrasive particles are used in EDG but with abrasive particles are used in EDDG

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) A disk without abrasive particles are used in EDG but with abrasive particles are used in EDDG

8) Which element does not belong to USM?

1 point

- a) Transducer
- b) Compressor
- c) Sine wave generator
- d) Tool holder

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Compressor

9) Choose the INCORRECT statement about AWJM

1 point

- I. Life of nozzle made of sapphire is 400 hr
- II. Life of nozzle made of WC is 30 hr
- III. Compressor is used
- IV. Intensifier is used
- V. Life of nozzle made of sapphire is 30 hr
- VI. Life of nozzle made of WC is 400 hr

- a) I, II and IV
- b) I, II and III
- c) III, V and VI
- d) IV, V and VI

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) III, V and VI

10) The effect of expanding a crystal upon electrical pulses is known as_____.

1 point

- a) Magnetic effect
- b) Piezoelectric effect
- c) Amplifying
- d) None of the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Piezoelectric effect