

Unit 8 - Week 6 : Hybrid 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

Week 6 : Hybrid Abrasive Machining Processes

Quiz : Assignment 6

Lec. 1: Elastic Emission Machining

Lec. 2: PMEDM, ECM, ECG, ECH and ELID

Feedback form

Week 7 : Advanced Abrasive Finishing Processes-1

Week 8 : Advanced Abrasive Finishing Processes-2

Download Videos

Text Transcripts

Assignment 6

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

Due on 2020-03-11, 23:59 IST.

1) Out of all the polishing processes, which of the following process removes material at atomic scale?

1 point

- a) Lapping
- b) Ice Bonded Abrasive Polishing
- c) Pitch polishing
- d) Elastic Emission Mechanism

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Elastic Emission Mechanism

2) In addition to Elastic Emission Mechanism, which of the finishing process is employed to polish optical lenses?

1 point

- a) Lapping
- b) Ice Bonded Abrasive Polishing
- c) Pitch polishing
- d) Super finishing

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Pitch polishing

3) The function(s) of the spherical tool in elastic emission mechanism is/are

1 point

- a) To produce shearing of peaks by forcing the abrasive particles
- b) To drag the abrasive particles in the gap between tool and workpiece
- c) To indent the abrasive particle on to the surface
- d) Both a and c

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) To drag the abrasive particles in the gap between tool and workpiece

4) By keeping all the grinding tool related properties like depth of cut, rpm etc., which of the following statement is correct for machining of Titanium super alloy?

1 point

- a) Conventional grinding gives higher material removal rates compared to electrochemical grinding
- b) Electrochemical grinding gives higher material removal rates compared to conventional grinding
- c) Conventional as well as electrochemical grindings give same amount of material removal rates
- d) Titanium super alloy is non-conductive

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Electrochemical grinding gives higher material removal rates compared to conventional grinding

5) The material of the tool sphere in Elastic Emission of Mechanism is

1 point

- a) Polyurethane
- b) Polystyrene
- c) Nylon
- d) Polymethylmethacrylate

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Polyurethane

6) Which of the following process is adopted to remove the scratch marks on the spectacle lenses?

1 point

- a) Ice bonded abrasive polishing
- b) Elastic emission mechanism
- c) Pitch polishing
- d) Both b & c

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Both b & c

7) The electrochemical machining process uses

1 point

- a) High voltage and low current
- b) Low voltage and high current
- c) High current and high voltage
- d) Low current and low voltage

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Low voltage and high current

8) The mass of dissolved material in ECM process is

1 point

- a) Directly proportional to time
- b) Independent of mechanical properties of workpiece
- c) Inversely proportional to the ratio of valency to atomic weight
- d) All the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) All the above

9) In which of the following finishing processes, cross hatch pattern on the finished surface is produced?

1 point

- I. Superfinishing
- II. Honing
- III. Electrochemical Honing

- a) Only II
- b) Both I & II
- c) Both II & III
- d) All the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Both I & II

10) The power source used in powder mixed EDM is

1 point

- a) Straight polarity
- b) Reverse polarity
- c) Depends on the application
- d) AC current is used in EDM instead of DC

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Depends on the application