

Unit 10 - Week 8 : Advanced Abrasive Finishing Processes-2

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

Week 7 : Advanced Abrasive Finishing Processes-1

Week 8 : Advanced Abrasive Finishing Processes-2

Quiz : Assignment 8

Lec. 1: Magneto Rheological Finishing and BE-MRF

Lec. 2: Magnetic Field Assisted Abrasive Finishing: CNP, CMMRF, MRAFF, R-MRAFF

Lec. 3: Summary of the Course

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Assignment 8

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

Due on 2020-03-25, 23:59 IST.

1) Magnetorheological fluids are _____.

1 point

- a) Viscous dominant fluids
 b) Elastic dominant fluids
 c) Viscoelastic fluids
 d) None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) None of these

2) The force that is responsible for shearing of surface peaks in magnetorheological finishing is

1 point

- a) Normal force generated between workpiece and rotating wheel
 b) Tangential force at the surface of abrasive particle and surface peak interaction
 c) Vector sum of both normal force and tangential force
 d) No mechanical forces are generated in magnetorheological finishing process

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Tangential force at the surface of abrasive particle and surface peak interaction

3) Passivation layer in CMP process indicates _____.

1 point

- a) Chemically reacted layer of surface
 b) Conversion layer due to heat interaction
 c) Contaminated layer due to polishing slurry
 d) Mechanically destroyed layer

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Chemically reacted layer of surface

4) The full form of CMP process is _____.

1 point

- a) Chemomechanical Polishing
 b) Chemomechanical Planarization
 c) Chemomechanical Prespiration
 d) Both a and b

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Both a and b

5) CIP stands for _____.

1 point

- a) Carbon Iron Particle
 b) Carbo Iron Particle
 c) Carbonyl Iron Particle
 d) Carbon assist Iron Particle

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Carbonyl Iron Particle

6) The function of CIP particles in magnetorheological finishing process is _____

1 point

- a) To remove the material from the surface
 b) To hold the abrasive particles firmly
 c) Both a & b
 d) To facilitate free motion to abrasive particle

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) To hold the abrasive particles firmly

7) Major disadvantages or limitations of AFF process is _____.

1 point

- a) Lack of control on medium viscosity
 b) Costlier media
 c) Lack of determinism
 d) All the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) All the above

8) Let hardness of the abrasive, parent material and passivation layer are h_1 , h_2 , and h_3 respectively. Then, the necessary condition to get a scratch free surface from CMP process is

1 point

- a) $h_1 > h_2 > h_3$
 b) $h_3 > h_2 > h_1$
 c) $h_2 > h_1 > h_3$
 d) $h_1 < h_2 < h_3$

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) $h_2 > h_1 > h_3$

9) Which of the following is not an advantage of magnetorheological finishing process?

1 point

- a) Used to finish lenses in optical industry
 b) Blind holes can be finished
 c) Polishing and deburring options can be combined
 d) Finishing rates are higher than manual finishing

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Blind holes can be finished

10) Magnetorheological Abrasive Flow Finishing process adopts the advantages of

1 point

- a) Complex component finishing capability from MRF process
 b) Controlling viscosity of the media with external means from AFF process
 c) Both a & b
 d) None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) None of these