

Unit 9 - Week 7 : Advanced Abrasive Finishing Processes-1

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

Quiz : Assignment 7

Lec. 1: Abrasive Flow Finishing: Part 1

Lec. 2: Abrasive Flow Finishing : Part 2

Lec. 3: Magnetic Field Assisted Abrasive Finishing : MAF, MADe, MFP.

Feedback form

Week 8 : Advanced Abrasive Finishing Processes-2

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Assignment 7

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

Due on 2020-03-18, 23:59 IST.

1) The advantage of pulsating flexible magnetic abrasive brush over the static one is

1 point

- a) Shuffling of abrasive particles
- b) More number of cutting edges are possible for shearing
- c) Iron particles are not required
- d) Both a and b

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) Both a and b

2) Rheology is a science of _____.

1 point

- a) Fluid dynamics
- b) Flow and deformation of fluids
- c) Deformation of solids
- d) Fluid behaviour under extrusion pressure

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Flow and deformation of fluids

3) Which one of the following is not an important element of the AFF process?

1 point

- a) Medium
- b) Tooling
- c) Volume of hydraulic oil
- d) Machine setup

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Volume of hydraulic oil

4) At a particular extrusion pressure, as the plasticizer content in AFF medium increases, the shear rate _____.

1 point

- a) Increases
- b) Decreases
- c) Increases first and then decreases
- d) Shear rate is independent on plasticizer content

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Increases

5) Which of the following finishing techniques results in sub nanometric level surface roughness?

1 point

- a) Ion beam machining
- b) Magnetorheological finishing
- c) Elastic emission machining
- d) All the above

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) All the above

6) A strong flexible magnetic abrasive brush is seen in finishing of _____.

1 point

- a) Ferro magnetic materials
- b) Non-ferromagnetic materials
- c) Not depends on type of material
- d) Para magnetic materials

No, the answer is incorrect.
Score: 0

Accepted Answers:
a) Ferro magnetic materials

7) Which of the following statement is correct with respect to Abrasive Flow Finishing?

1 point

- a) Axial force is responsible for indentation
- b) Radial force is responsible for shearing of roughness peaks
- c) The velocity in the radial direction of media is higher than the axial velocity
- d) None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
d) None of these

8) After finishing with abrasive flow finishing technique, the machined surface comprises of _____.

1 point

- a) Recast layer
- b) Compressive residual stresses
- c) Tensile residual stresses
- d) Refined grain structure

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Compressive residual stresses

9) Which of the following variant(s) of AFF process is used for finishing blind holes?

1 point

- a) Two – way AFF process
- b) Orbital AFF process
- c) One – way AFF process
- d) Both b and c

No, the answer is incorrect.
Score: 0

Accepted Answers:
b) Orbital AFF process

10) Which one of the following is not a machine related parameter in AFF process?

1 point

- a) Number of cycles
- b) Media flow rate
- c) Media viscosity
- d) Extrusion pressure

No, the answer is incorrect.
Score: 0

Accepted Answers:
c) Media viscosity