Assignment 6

How to access the portal?

Course outline

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Equal Channel Angular Pressing (ECAP)
- Powder Forming (PFM)
- Hot Working (HW)
- Die Design
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- Assignment 6

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Assignment 6

The term for the following deformation process is ______.

1. Which deformation is most useful to reduce the sample’s width and thickness? 3 points

RTP - 30º rotation after each pass in same direction
RTP - 90º rotation after each pass in a different direction
RTP - 180º rotation after each pass in a different direction
RTP - 90º rotation after each pass in a different direction

2. The available temperature range is 300°C - 1000°C during the deformation process. 3 points

- Increasing sample density
- Increasing sample size
- Decreasing sample size
- Decreasing sample density

3. What property of the material is necessary to ensure that the material can be extruded properly? 3 points

- Plastic flow
- Elastic flow
- Magnetic flow
- Electrical flow

4. When a piece of material is extruded, the following process can be observed. 3 points

- Increasing sample density
- Increasing sample size
- Decreasing sample size
- Decreasing sample density

5. When a piece of material is extruded, the following process can be observed. 3 points

- Increasing sample density
- Increasing sample size
- Decreasing sample size
- Decreasing sample density

6. If a piece of material is extruded, the following process can be observed. 3 points

- Increasing sample density
- Increasing sample size
- Decreasing sample size
- Decreasing sample density

7. The number of cycles required to obtain a strain of 0.5 in a PFM (progressive extrusion moulding) technique is reduced by 10% with each additional cycle. 3 points

- 5 cycles
- 6 cycles
- 7 cycles
- 8 cycles

8. What type of material is most suitable for extrusion? 3 points

- Glassy materials with a high glass transition temperature
- Glassy materials with a low glass transition temperature
- Glassy materials with a high melting point
- Glassy materials with a low melting point

9. The following graph shows the relationship between the strain and the temperature. 3 points

- Strain
- Temperature
- Density
- Frequency

10. Which deformation process is most suitable for the material? 3 points

- RTP
- HPF
- ECAP
- HW

Die
- Sample
- Plunger

Press:

- Sample
- Die
- Plunger

What is the equivalent strain after 3 passes? 2 points

- 0.5
- 1.0
- 1.5
- 2.0

Acknowledgment:

No acknowledgment is necessary.

Due on 2019-09-11, 12:59 EST