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Courses » Theory of Production Processes

Announcements **Course** Ask a Question Progress Mentor

Unit 9 - Week 8

Course outline

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Week 1

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Week 8

- Lecture 36: Extrusion process: Classification and analysis
- Lecture 37: Drawing of rods, tubes and wires
- Lecture 38: Analysis of drawing operation
- Lecture 39: Sheet metal operations
- Lecture 40:

Assignment 8

The due date for submitting this assignment has passed. **Due on 2018-03-21, 23:59 IST.**

Submitted assignment

1) Extrusion ratio is defined as **1 point**
 Where A_0 = original area of billet & A_f = cross-sectional area of extruded product

 A_f / A_0 $A_f \times A_0$ A_0 / A_f $A_0 + A_f$ **No, the answer is incorrect.****Score: 0****Accepted Answers:** A_0 / A_f

2) Which of the following relation holds good for extrusion ratio (R) and **1 point**
 frictional reduction in area of extruded product (r)?

 $R = 1 / (1 + r)$ $R = 1 + r$ $R = (1 + r)^2$ $R = 1 / (1 - r)$ **No, the answer is incorrect.****Score: 0****Accepted Answers:** $R = 1 / (1 - r)$

3) In shearing maximum punch force is **1 point**
 Where s_u = ultimate tensile strength of sheet, t = thickness of sheet & L = total length of sheared edge

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Score: 0

Accepted Answers:
0.7 [s_u t L]

4) In progressive forming 1 point

- Parts are formed at the successive stages which are carried out in different die on each stroke of the process
- Parts are formed at the successive stages which are carried out in the same die on each stroke of the process
- Sheet metal is stretched and simultaneously bent to achieve shape change
- None of these

No, the answer is incorrect.
Score: 0

Accepted Answers:
Parts are formed at the successive stages which are carried out in the same die on each stroke of the process

5) A moving mandrel is used in 1 point

- Wire drawing
- Tube drawing
- Metal cutting
- Forging

No, the answer is incorrect.
Score: 0

Accepted Answers:
Tube drawing

6) Collapsible tubes are made by 1 point

- Drawing
- Spinning
- Rolling
- Impact extrusion

No, the answer is incorrect.
Score: 0

Accepted Answers:
Impact extrusion

7) For wire drawing operation, the work material should essentially be 1 point

- Ductile
- Tough
- Hard
- Malleable

No, the answer is incorrect.
Score: 0

Accepted Answers:
Ductile

8) Wrinkling in flange is a forging defect due to 1 point

- Anisotropy of the material
- Insufficient blank holding force
- High stress and sharp die radius
- Maximum punch force

No, the answer is incorrect.

Score: 0

Accepted Answers:

Insufficient blank holding force

9) A brass billet is to be extruded from its initial diameter of 100 mm to a final diameter of 50 mm. The operation is carried out at a working temperature of 700 °C and the extrusion constant is 250 MPa. The force required for extrusion is **1 point**

- 5.44 MN
- 2.72 MN
- 1.36 MN
- 0.36 MN

No, the answer is incorrect.

Score: 0

Accepted Answers:

2.72 MN

10) Which of the following statement is /are correct for the Rod and Wire drawing? **1 point**

- (i) Draw benches are used for drawing of rods and tubes (which can not be coiled)
- (ii) On the draw benches, rods are first made pointed using swager and then inserted through the die and moved using a chain drive or hydraulic mechanism.

- Only i
- Only ii
- Both i and ii
- None of these

No, the answer is incorrect.

Score: 0

Accepted Answers:

Both i and ii

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