

Unit 9 - week 8

Course outline

How does an NPTEL online course work?

week 1

week 2

Week 3

Week 4

Week 5

Week 6

Week 7

week 8

Deleterious Effect of Phosphorus

Strength of Solidifying Strand

Brittle Zone Near Solidus

Strength and Toughness of Solid Shell

Role of Chemistry on Solidification Behaviour

Quiz : Assignment 8

Week 8 Feedback :Steel Quality: Role of Secondary Refining and Continuous Casting

Week 9

Week 10

Week 11

Week 12

Download Videos

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.

Either One or Two Solutions are Correct for Each Question .

When One Solution is Correct , choice of only the Correct One will give ONE mark . Choice of more than One will result in ZERO mark .

When Two Solutions are Correct , choice of only the TWO CORRECT will give ONE mark . Choice of more than Two will result in ZERO mark . One Correct Solution will give 0.5 mark

1) The following element is known to **segregate more** during solidification of steel :

1 point

- Si
 S
 Mn
 P
 Cr

No, the answer is incorrect.
Score: 0

Accepted Answers:
S
P

2) **High segregation** will result in the following **problem** during solidification :

1 point

- Lower liquidus
 Lower solidus
 Thinner solid shell
 No effect

No, the answer is incorrect.
Score: 0

Accepted Answers:
Lower solidus
Thinner solid shell

3) Solid fraction f_S during casting increases from 0 to 1 . **ZST** corresponds to

1 point

- $f_s = 0$

 $f_s = 0.7$

 $f_s = 0.9$

 $f_s = 1$

No, the answer is incorrect.
Score: 0

Accepted Answers:
 $f_s = 0.7$

4) Solid fraction f_S during casting increases from 0 to 1 . **ZDT** corresponds to

1 point

- $f_s = 0$

 $f_s = 0.7$

 $f_s = 0.9$

 $f_s = 1$

No, the answer is incorrect.
Score: 0

Accepted Answers:
 $f_s = 1$

5) Solid fraction f_S during casting increases from 0 to 1 . **LIT** corresponds to

1 point

- $f_s = 0$

 $f_s = 0.7$

 $f_s = 0.9$

 $f_s = 1$

No, the answer is incorrect.
Score: 0

Accepted Answers:
 $f_s = 0.9$

6) Strength of solid shell during solidification depends on :

1 point

- Shell thickness
 Liquidus

 Proportion of δ and γ in solid

No, the answer is incorrect.
Score: 0

Accepted Answers:
Shell thickness
Proportion of δ and γ in solid

7) The following is the approximate brittle temperature zone during solidification :

1 point

- $f_S = 0.9 - 1$

 $f_S = 0.5 - 0.7$

 $f_S = 0.3 - 0.5$

 $f_S = 0 - 0.3$

No, the answer is incorrect.
Score: 0

Accepted Answers:
 $f_S = 0.9 - 1$

8) $\delta \rightarrow \gamma$ transformation in 0.05 % C steel occurs at following stage :

1 point

- Does not occur
 After solidification

 $f_S = 0.9 - 1$

 $f_S = 0 - 0.3$

No, the answer is incorrect.
Score: 0

Accepted Answers:
After solidification

9) $\delta \rightarrow \gamma$ transformation in 0.11 % C steel occurs at following stage :

1 point

- Does not occur
 After solidification

 $f_S = 0.9 - 1$

 $f_S = 0 - 0.3$

No, the answer is incorrect.
Score: 0

Accepted Answers:
 $f_S = 0.9 - 1$

10) $\delta \rightarrow \gamma$ transformation in 0.6 % C steel occurs at following stage :

1 point

- Does not occur
 After solidification

 $f_S = 0.9 - 1$

 $f_S = 0 - 0.3$

No, the answer is incorrect.
Score: 0

Accepted Answers:
Does not occur