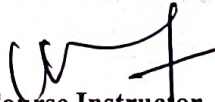

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Flipped Class			
Programme & Branch	B.E. B.Tech / CIVIL, TXT, BIO TECH & NST	Year/Sec/Sem	III, IV / V, VII
Course Code & Name	50 ME L03 – Composite Materials	Date	14.11.2022

The video link for the topic Squeeze casting process is <https://youtu.be/crbK1CaZR5Y>. All the students are requested to listen the video and come prepared for the discussion to be held on 14.11.2022 (5<sup>th</sup> hour).

  
Course Instructor  
U. Vivek


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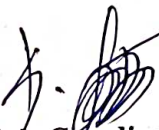
Flipped Class Activity Report			
<b>Programme &amp; Branch</b>	B.E. B.Tech / CIVIL, TXT, BIO TECH & NST	<b>Year/Sec/Sem</b>	III, IV / V, VII
<b>Course Code &amp; Name</b>	50 ME L03 – Composite Materials	<b>Date</b>	14.11.2022


### List of Questions

1. What is squeeze casting process?
2. What are the advantages of squeeze casting?
3. Mention the application of Squeeze Casting.
4. What should be the range of pressure (in MPa) under which molten metal is pressed to form the castings by squeeze casting method?
5. An intermediate feeding component takes part in the in-direct type of squeeze casting.
  - a) True
  - b) False

The above questions have been asked to the students and they shared their answers. All the students answered questions no. 1, no.2 and no.3 correctly. But few students answered questions No. 4 and 5 correctly. So, I discussed the non-answered topic in the classroom.

  
Course Instructor  
(U.Vivek)

  
Module Coordinator  
(Dr. K.Santhanam)

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Flipped Class – Questions and Answers			
Programme & Branch	B.E. B.Tech / CIVIL, TXT, BIO TECH & NST	Year/Sec/Sem	III, IV / V, VII
Course Code & Name	50 ME L03 – Composite Materials	Date	14.11.2022

1. What is squeeze casting process?

Squeeze casting, also called liquid forging, is a hybrid metal forming process that combines permanent mold casting with die forging in a single step in which a specific amount of molten metal alloy is poured into a preheated and lubricated die and subsequently forged and solidified under pressure.

2. What are the advantages of squeeze casting?

The squeeze casting has very low gas entrapment, lower shrinkage cavities, lower die costs, and very high quality of surface with fine details of castings. Also, it produces fine grain size to improve the mechanical properties of the castings.


3. Mention the application of Squeeze Casting.

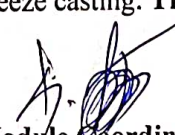
Squeeze casting is an economical, simple and convenient process. It has found extensive application in automotive industry in producing aluminium front steering knuckles, chassis frames, brackets or nodes. High capacity propellers for boat-engine.


4. What should be the range of pressure (in MPa) under which molten metal is pressed to form the castings by squeeze casting method?

In squeeze casting, the punch portion of the upper die is forced into the cavity by displacing the molten metal under pressure until it fills the annular space between the die and the punch. Normally, the metal is kept under pressure of 50 to 140 MPa to avoid the formation of shrinkage defects.

5. An intermediate feeding component takes part in the in-direct type of squeeze casting. **True**

  
Course Instructor  
(U. Vivek)

  
Module Coordinator  
(Dr. K. Santhanam)


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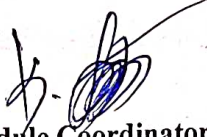
Think, Pair & Share Activity Report			
<b>Programme &amp; Branch</b>	B.E. B.Tech / CIVIL, TXT, BIO TECH & NST	<b>Year/Sec/Sem</b>	III, IV / V, VII
<b>Course Code &amp; Name</b>	50 ME L03 – Composite Materials	<b>Date</b>	19.10.2022

**Question:**

Differentiate Bag Molding and Compression Molding

The above questions have been asked to the students and I gave them 2 minutes to think of the answer to the question. The 3 students formed as a team and they discussed the answer with them for 5 minutes. Finally, all the teams shared their answer. Out of 7 teams, 3 teams have exactly known the difference Bag Molding and Compression Molding. The remaining teams came to know the differences between Bag Molding and Compression Molding from the team answered.

  
Course Instructor  
(U. Vivek)

  
Module Coordinator  
(Dr. K. Santhanam)