

Unit-1 Casting And Joining Process

Part-A 2Mark

1. What are the advantages and applications of ceramic moulds?

Ans:

Advantages:

- It is less expensive
- Intricate objects can be casted.
- Castings of thin sections and which do not require machining can be produced.

Applications:

- It is mainly used for all material using better ingredient in slurry.

2. What are the applications of casting?

Ans:

Transportation vehicles (in automobile engine and tractors)

- Machine tool structures
- Turbine vanes and power generators
- Mill housing
- pump filter and valve

3. What are the different types of furnaces used for casting?

Ans:

- Cupola Furnace.
- Open Hearth furnace
- Crucible Furnace.
- Pot Furnace.
- Electric Furnace.

4. Classify moulding Machines?

Ans:

- Squeezer Machine

- Jolt machine.
- Jolt – squeezer Machine
- Sliding Machines.
- Patten draw Machines.

5.What is core venting?

Ans:

While pouring the mould with molten metal mould walls and cores heat up rapidly and releases large amount of gases. In order to prevent casting defects these gases must be vented out. For this purpose core venting are used. Core venting are incorporated in the core box itself.

6. Mention the specific advantages of Co2 moulding Process.?

Ans:

- Gives strength and hardness to core.
- Process cost is less.
- It saves time on heating.
- It can be stored for long use.

7.Define resistance welding process?

Ans:

Resistance welding is a process where coalescence is produced by the heat obtained from resistance offered by the workpiece to the flow of electric current in a circuit of which the workpiece is a part and by the application of pressure.

8.Classify various ARC welding processes?

Ans:

Arc welding

- Carbon arc
- Metal arc
- Metal inert gas
- Tungsten inert gas

- Plasma arc
- Submerged arc
- Electro-slag

9.Mention the applications of friction welding?

Ans:

- Used in refrigeration.
- Used in super alloys.
- Making simple forging.
- Production of taper and reamer drills
- Production of axle shafts , valves and gears.

10.Laser beam welding advantage.

Advantages.

- Wide variety of metals can be welded.
- Thermal damage is minimum.
- Weld metal is purified.
- Good ductility and mechanical properties
- Welds are vacuum tight.
- Filler metal is not used.
- No effect on heat treated components.

PART-B

- 1. Briefly explain about Investment casting. Investment Casting.**
- 2. Define welding, mention its types, Explain Gas welding with a neat sketch?**
- 3. Give the Difference between any 16 Gas Welding and Arc Welding ?**
- 4. Explain the method of laser beam welding and give their applications**

5. Explain the working principles and application of Injection Moulding.