

Austenite phase in Iron-Carbon equilibrium diagram _____

- a. is face centered cubic structure
- b. has magnetic phase
- c. exists below 727 °C
- d. all of the above

What is the crystal structure of δ -ferrite?

- a. Body centered cubic structure
- b. Face centered cubic structure
- c. Orthorhombic crystal structure
- d. None of the above

Flash smelting is used for the production of

- ☐ Copper
- ☐ Lead
- ☐ Tungsten

The process of reducing the ore with carbon in the presence of flux is known as

- ☐ Sintering
- ☐ Smelting
- ☐ Calcination
- ☐ Roasting
- ☒ Aluminium

Main function of roasting is

- ☐ To remove volatile substances
- ☐ Oxidation
- ☐ Reduction
- ☐ Slag formation

Heating of pyrites in air for oxidation of sulphur is called

- ☐ Roasting
- ☐ Calcination
- ☐ Smelting
- ☐ Slagging
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Which is not basic flux?

- ☐ CaCO_3
- ☐ Lime
- ☐ SiO_2
- ☐ CaO

When lime stone is heated strongly, it gives off CO_2 . In metallurgy this process is known as

- ☐ Calcination
- ☐ Roasting
- ☐ Smelting
- ☐ Ore dressing

Purpose of smelting of an ore is

- ☐ To oxidise it
- ☐ To reduce it
- ☐ To remove vaporisable impurities
- ☐ To obtain an alloy

Smelting is done in

- ☐ Blast furnace
- ☐ Muffle furnace
- ☐ Open–hearth furnace
- ☐ Electric furnace

Zone refining is based on the principle that _____.

- (i) impurities of low boiling metals can be separated by distillation.
- (ii) impurities are more soluble in molten metal than in solid metal.
- (iii) different components of a mixture are differently adsorbed on an absorbent.
- (iv) vapours of the volatile compound can be decomposed in pure metal.

Electrolytic refining is used to purify which of the following metals?

- (i) Cu and Zn
- (ii) Ge and Si
- (iii) Zr and Ti
- (iv) Zn and Hg

Which of the following options are correct?

- (i) Cast iron is obtained by remelting pig iron with scrap iron and coke using hot air blast.
- (ii) In the extraction of silver, silver is extracted as cationic complex.
- (iii) Nickel is purified by zone refining.
- (iv) Zr and Ti are purified by van Arkel method

The important processes involved in the smelting in the extraction of iron from haematite ore are

- a.Reduction
- b.Slag Formation
- c.Combustion
- d.Fusion

The process of Reducing the ore with carbon in the presence of flux is known as

- a.Sintering
- b.Smelting
- c.Calcination
- d.Roasting

Dow process is used in the extraction of

- a.Zinc
- b.Aluminium
- c.Magnesium
- d.Lead

Which of the following process has the objective of precipitation of metal in aqueous solution?

a. Leaching

b. Cementation

c. Converting

d. Roasting

- What is the role of flux in metallurgical processes?
- Mention about the Function of Predominance Area Diagram?
- Define Matte & Speiss?
- Differentiate between a Metal & an Alloy?
- Classify various processes and their stages involved in Pyrometallurgy and Hydrometallurgy?
- How is Bacterial Leaching different from Pressure Leaching?
- Discuss about the use of Ellingham Diagram?
- What is Agglomeration? Discuss about various agglomeration process?
- Differentiate between free energy and Internal energy of a chemical Reaction?
- How is Electrowinning different from Electrorefining?