Activities in roasting in extraction of copper

• Heat concentrated ore in excess air in reverberatory furnace

List of impurities removed in roasting in extraction of copper

- Moisture
- Volatile impurities
- S. P. As

Consequence of roasting in extraction of copper

- · Removal of impurities
- Conversion of copper pyrite to sulphides
- · Partial oxidation of sulphide

Expression of reaction of removal of sulphide impurities from in roasting in extraction of copper

$$S + O_2 \longrightarrow SO_2$$

Expression of reaction of removal of phosphorus impurities from in roasting in extraction of copper

$$P_4 + O_2 \longrightarrow P_2O_5$$

Expression of reaction of copper pyrite to sulphides in roasting in extraction of copper

$$CuFeS_2 + O_2 \longrightarrow Cu_2S + FeS + SO_2$$

Expression of reaction of partial oxidation of copper sulphide in roasting in extraction of copper

$$Cu_2S + O_2 \longrightarrow Cu_2O + SO_2$$

Expression of reaction of partial oxidation of iron sulphide in roasting in extraction of coper

$$FeS + O_2 \longrightarrow FeO + SO_2$$

Reactants in Expression of reaction of removal of sulphide impurities from in roasting in extraction of copper

- Sulphur
- Oxygen

Reactants in Expression of reaction of removal of phosphorus impurities from in roasting in extraction of copper

- Phosphorus
- Oxygen

Reactants in Expression of reaction of copper pyrite to sulphides in roasting in extraction of copper

- · Copper pyrite
- Oxygen

Reactants in Expression of reaction of partial oxidation of copper sulphide in roasting in extraction of copper

- Cuprous sulphide
- Oxygen

Reactants in Expression of reaction of partial oxidation of iron sulphide in roasting in extraction of coper

- · Ferrous sulphide
- Oxygen

Products in Expression of reaction of removal of sulphide impurities from in roasting in extraction of copper

Sulphur dioxide

Products in Expression of reaction of removal of phosphorus impurities from in roasting in extraction of copper

· Phosphorus pentoxide

Products in Expression of reaction of copper pyrite to sulphides in roasting in extraction of copper

- · Cuprous sulphide
- · Ferrous sulphide
- · Sulphur dioxide

Products in Expression of reaction of partial oxidation of copper sulphide in roasting in extraction of copper

- · Cuprous oxide
- Sulphur dioxide

Products in Expression of reaction of partial oxidation of iron sulphide in roasting in extraction of coper

- Ferrous oxide
- · Sulphur dioxide