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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