

Leaching of Copper from Copper Ore Using Sulphuric Acid in the Presence of Hydrogen Peroxide as an Oxidizing Agent: An Optimized Process

Authors : Hilary Rutto

Abstract : Leaching with acids are the most commonly reagents used to remove copper ions from its copper ores. It is important that the process conditions are optimized to improve the leaching efficiency. In the present study the effects of pH, oxidizing agent (hydrogen peroxide), stirring speed, solid to liquid ratio and acid concentration on the leaching of copper ions from it ore were investigated using a pH Stat apparatus. Copper ions were analyzed at the end of each experiment using Atomic Absorption (AAS) machine. Results showed that leaching efficiency improved with an increase in acid concentration, stirring speed, oxidizing agent, pH and decreased with an increase in the solid to liquid ratio.

Keywords : leaching, copper, oxidizing agent, pH stat apparatus

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020