

Automation fundamentals of continuous mining system

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Resumen

Even though block caving mining method is already the most economical underground mining method for large massive ore bodies, it requires further technical advancements to also become a practical method for deep deposits with low grade and high stressed zones. Continuous Mining System is a material handling approach introduced by Codelco, Chile. This system is recognized as an alternative approach in future block caving operation due to its high extraction rate and productivity and improved safety. This paper describes the research undertaken at the University of Chile, Block Caving Laboratory to understand the operational characteristics and automation potentials of Continuous Mining System. The main objective of the R&D was to establish the short-term extraction planning fundamentals for the system and to lay the basis for its potential automation. Various pilot tests were conducted using a representative scaled physical model. The implementation of an automation system shows higher productivity due to the higher extraction rate and better utilization of the material transport system.

Palabras clave

Palabras clave de autor: [Continuous Mining System](#); [automation](#); [productivity](#); [block caving](#)

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