

Joint Simulation and Estimation for Geometallurgical Modeling of Crushing Consumption Energy in the Mineral Processing Plants

Authors : Farzaneh Khorram, Xavier Emery

Abstract : In this paper, it is aimed to create a crushing consumption energy (CCE) block model and determine the blocks with the potential to have the maximum grinding process energy consumption for the study area. For this purpose, a joint estimate (co-kriging) and joint simulation (turning band method and plurigaussian methods) to predict the CCE based on its correlation with SAG power index (SPI), $A \times B$, and ball mill bond work Index (BWI). The analysis shows that TBCOSIM and plurigaussian have the more realistic results compared to cokriging. It seems logical due to the nature of the data geometallurgical and the linearity of the kriging method and the smoothing effect of kriging.

Keywords : plurigaussian, turning band, cokriging, geometallurgy

Conference Title : ICGSK 2024 : International Conference on Geostatistics and Simple Kriging

Conference Location : Rome, Italy

Conference Dates : July 22-23, 2024