

**Title**

An Industrial Simulation System for Copper Concentration Plants

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**Abstract**

The high copper prices, together with the lack of experienced personnel in mineral processing operations, have lead to high investments in technology for this industry. Simulation based training and engineering validation, trough stress-tests applied to the integrated process, are becoming necessary phases for new projects and adoption of new technologies —such as APC— given that it is an instance to educate on the best operational practices over a safe environment. On this paper, a simulation platform for comminution and classification processes including crushing, grinding, classification, flotation and thickening is presented. The simulation is based on UniSim. A case study is included, in which a complete SAG and secondary grinding/classification circuit has been simulated; supervisors and operators have been trained in order to educate them on the best operational practices on APC applications. The OTS sessions have lead to an increase in the utilization of APC applications from 20% to 70% in average.