

## Performance of 500 m<sup>3</sup> TankCell® at Kevitsa Cu-Ni-PGM concentrator

Toni Mattsson<sup>1,a</sup>, Tomi Maksimainen<sup>2</sup>, Rodrigo Grau<sup>1</sup>, and Antti Rinne<sup>1</sup>

<sup>1</sup>*Outotec Beneficiation, Espoo, Finland*

<sup>2</sup>*Kevitsa mine, Finland*

**Abstract.** Outotec TankCell e500 flotation cell, with 500 m<sup>3</sup> of efficient flotation volume, has been in operation since October 2014 at Kevitsa Cu-Ni-PGM concentrator as the first Cu rougher flotation cell. The 500 m<sup>3</sup> flotation cell has proven to provide metallurgical superiority at very low specific power. On average the cell has recovered 71% of copper contained in the flotation feed. The cell has produced the concentrate with the Cu grade equal to 17% Cu. The typical specific power for the cell is around 0.4 kW/m<sup>3</sup> (blower power not included). After the start-up of the cell the operating parameters have varied. The mixing speed have varied from 4.9 to 7.0 m/s and the superficial gas velocity from 0.3 to 1.5 cm/s. At various operating parameters the mixing, gas dispersion and metallurgical performance of the cell have been evaluated. In this paper a review of the hydrodynamic and metallurgical performance of the cell is presented. The paper focuses on the interactions of mixing intensity, bubble size and metallurgical performance in industrial application.

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<sup>a</sup> Corresponding author: [toni.mattsson@outotec.com](mailto:toni.mattsson@outotec.com)