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## Media Release

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### Pre-concentration technology wins 2015 CEEC Medal



The 2015 CEEC Medal has been awarded to Nigel J Grigg and Georges J Delemontex for their paper titled; “The Pre-Concentration of Precious and Base Metal Deposits Using the InLine Pressure Jig (IPJ); Higher Feed Grades and More Metal,” presented at the International Mineral Processing Conference 2014, Santiago, Chile.

The CEEC Medal is an annual award for the most outstanding published paper, article or case study profiling beneficial strategies for eco-efficient comminution.

“The CEEC Medal is intended to bring attention to ‘best-in-class’ research or documentation in the field of eco-efficient comminution. The area of comminution (crushing and grinding ore) provides significant opportunities for improved profit and energy efficiency gains in the mining industry,” noted CEEC Director, Dr Zeljka Pokrajcic.

Nominations for the 2015 CEEC medal came from around the globe. Papers detailing new comminution devices, potential benchmarking indices, full scale grinding equipment comparisons and optimisation, pre-concentration initiatives, and circuit modelling were proposed. The CEEC Medal Evaluation Committee included, for the first time, an independent industry leader to review the nominated papers, assessing aspects such as originality, applicability, supporting research and documentation, prospective impact, potential energy savings, and presentation style.

The shortlisted nominations were:

- *Michelle Y Levesque, Dean L Millar. The link between operational practices and specific energy consumption in metal ore milling plants – Ontario experiences. Minerals Engineering 71 (2015) 146–158.*



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- *Nigel J Grigg, Georges J Delemontex. The Pre-Concentration of Precious and Base Metal Deposits Using the InLine Pressure Jig (IPJ); Higher Feed Grades and More Metal. International Mineral Processing Conference 2014, Santiago, Chile.*
- *Grant R Ballantyne, Malcolm S Powell. Benchmarking Comminution Energy Consumption for Improved Efficiency. Mill Operators Conference 2014, Townsville, Australia.*
- *Dave Rose, David G. Meadows, Mike Westendorf. Increasing SAG mill Capacity at the Copper Mountain Mine through the Addition of a Pre-Crush Circuit. SME Annual Conference 2015, Denver, USA.*
- *Joseph Lessard, Jan de Bakker, Larry McHugh. Development of ore sorting and its impact on mineral processing economics. Minerals Engineering 65 (2014) 88-97.*

Although all these papers ranked highly, Grigg's and Delemontex's paper on pre-concentration using the InLine Pressure Jig (IPJ) was selected for the 2015 CEEC medal because of the potential impact of pre-concentration in reducing the energy used in comminution, and the paper's several quantified examples. The paper detailed the installation of IPJs in gold and polymetallic full-scale applications in the 1-15mm size range. The paper reports significant upgrade by the removal of low-grade ores, mainly silicates. The strategy of pre-concentration, either by the removal of gangue material before size reduction, or by separation of material for processing by alternate routes, significantly reduces the energy required for comminution, and decreases operating and capital costs. In addition, it effectively increases the size of the ore deposit. The CEEC Medal selection panel noted an oft-quoted phrase by industry veteran Dr Rob Morrison "The most energy-efficient way to break a rock is not to break it at all."

CEEC and its Board congratulate Grigg and Delemontex on their win, and the other short-listed authors for their important contributions to the cause of reducing comminution energy consumption.

Previous winners of the CEEC Medal include

Rybinski, E., Gherzi, J., Davila, F., Linares J., Valery, W., Jankovic, A., Valle, R., Dikmen S., *Optimisation and Continuous improvement of the Antamina Comminution Circuit* (2011) Proceedings of 5th International Conference on Autogenous and Semi-Autogenous Grinding Technology (SAG2011).

C. Wang, S. Nadolski, O. Mejia, J. Drozdiak, B. Klein *Energy and Cost Comparisons of HPGR based circuits with the SABC circuit installed at the Huckleberry Mine.* 2013

Dr Geoff Brent, Peter Dare-Bryan, Stuart Hawke, and Michael Rothery *Ultra-High-intensity Blasting – A new Paradigm in Mining.* Worldgold 2013

Nominations for the 2016 CEEC Medal open on October 15, 2016 and details regarding applications can be found on CEEC's web site. Studies detailing financial gains from energy efficient processing will attract extra weight in selecting the CEEC Medal in 2016.



**About CEEC:** CEEC is a not-for-profit global company whose mission is to accelerate knowledge transfer in the field of energy-efficient comminution (crushing and grinding). CEEC aims to raise awareness of beneficial alternative comminution strategies with the objective of improving earnings, achieving lower processing costs and gaining energy efficiencies in the mining sector.

CEEC is the acronym for the Coalition for Eco Efficient Comminution. CEEC was established by a visionary group of mining industry leaders, who recognised the need to provide a platform for effective communication of the latest technical findings on efficient comminution practices. Extensive research and improved engineering design has established that a range of improved blasting, crushing and grinding techniques may lower project costs, and carbon footprint. These include relatively straight forward strategies such as removing waste material before size reduction, a better combination of grinding technologies and targeting larger grind sizes where mineralogy allows.

CEEC, a global not-for-profit company, is funded wholly by sponsorship from the mineral industry - Anglo American, Barrick Gold, Beacon Events, Indophil Resources NL, Gekko Systems, Ausenco, XT, Outotec, Orica, New Gold Inc., Derrick Corporation, Metso, AMIRA International, Mirabela Nickel, MMG, Weir Minerals, Multotec Ltd and Russell Mineral Equipment.

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1. CEEC Logo

