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SUCCESSES ACHIEVED THROUGH INCORPORATING RECENT DEVELOPMENTS IN JAMESON CELL TECHNOLOGY INTO AN EXISTING JAMESON CELL CIRCUIT

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ABSTRACT

The use of micro-bubble flotation technology has become commonplace in the Australian Coal Industry since the first upgrades of conventional flotation circuits began in the early 1990's. Since that time a variety of in-house customisations and supplier driven developments have been made to the various devices available in the marketplace. In particular, continuing developments in Jameson Cell technology has yielded significant improvements in device performance, capacity and operability. Subsequently, opportunities exist within many of the earlier Jameson Cell installations to utilise the more recent innovations to successfully deliver significant process improvement. These improvements have been achieved in association with the Jameson Cell units through modifications to the internal cell design; downcomer volume flow rate; orifice design; air intake configuration and flow rates; in-froth washing options; and control and instrumentation strategies (Harbort and Murphy et al 2000).

This paper describes the work undertaken to optimise an existing Jameson Cell circuit installed at the BMA Riverside Mine since 1996. It discusses the key operational and metallurgical aspects examined to identify and quantify opportunities for performance improvement within the circuit. Additionally, the rigorous performance review approach undertaken to assess potential circuit reconfiguration options is discussed, including an alternate approach for benchmarking flotation cell performance. The key outcomes from this project work will be summarised in a non-site specific manner, utilising similar evaluation works undertaken at other sites, to provide useful guidance to other parties wishing to benefit from similar Jameson Cell flotation circuit improvements.

Reference:
Wex, T., Hill, B., Meyers, A., & Clark, L. (2004). Successes Achieved Through Incorporating Recent Developments in Jameson Cell Technology into an Existing Jameson Cell Circuit. In W. Membrey (Ed.), *Proceedings of the Tenth Annual Australian Coal Preparation Conference* (pp. 129-139). Pokolbin: ACPS.