

LATROBE MAGNESIUM PROJECT

MAGNESIUM METAL RESULTS FROM HYDROMET/RETORT TEST WORK

The Company is pleased to announce that the recent retort test work conducted by Prominco Pty Limited was successful in recovering magnesium metal from the Hazelwood brown coal fly ash.

The recovery rate for the calcined hydrometallurgically treated fly ash was calculated at approximately 40% as compared to a commercial operation using Dolime which is normally in the order of 75% recovery. The low metallic Mg recovery rate obtained was attributed to the still elevated sulphur content of the fly ash, approximately 1%, and significant negative contributions associated with the hematite and silica components.

The results indicated that acceptable levels of metallic Mg recovery for calcined fly ash will be achieved with the reduction of:

- sulphur content in the fly ash to 0.20% or less;
- Fe₂O₃ to at least 3.0%; and
- Silica to 2%.

In order to devise a simple hydrometallurgical process to remove the sulphur, hematite and silica impurities from the fly ash, Latrobe commissioned a number of chemothermodynamic modelling studies from Dr Stephen Short of Ecoengineers Pty Ltd.

The results of these studies indicated a proposed process which involves only three simple hydromet processes, one of which is essentially a straightforward physical separation.

Metcon Laboratories have been engaged to conduct a sufficient number of bench trials of the proposed three unit processes comprising this hydromet process. The results of these trials are expected within the six to eight weeks.

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