Latrobe Magnesium

ABN 52 009 173 611

STRONG INITIAL CEMENT TEST RESULTS

5 March 2015, Sydney Australia: Latrobe Magnesium Limited (ASX:LMG) achieved progress in the first of its large-scale concrete trials on the cementitious material from its recently processed China sample.

The LMG cementitious material appears to behave like a conventional pozzolan, lagging the pure GP cement mix over the first 7 days, but by 14 days age has essentially caught up in compressive strength and has surpassed the conventional fly ash mix in strength development.

The trial was conducted on 16 February 2015 in which a load of 40 MPa nominal grade shotcrete was obtained from Western Suburbs Concrete in Penrith, western Sydney. The load was batched in such a way that 30% of the cement was left out, and was then split into three by discharging 0.40 m^3 into each of three mini-agitators. The 30% outstanding Gladstone GP cement was added to the first mini-agitator, and 30% w/w of cementitious content Bayswater fly ash was added to the second, and 30% w/w LMG cementitious material was added to the third mini-agitator. Each was mixed for five minutes and used to produce test specimens for performance assessment. This process was used to limit the effect on performance of variations in the mix design as batched so that the influence of the cementitious additives could be discerned more clearly.

Compressive strength development is normally assessed at 28 days, but it is still two weeks until that milestone is reached. In the meantime, we are pleased to report the 7 and 14 day Unconfined Compressive Strength (UCS) results, as listed in the Table below:

Age (days)	Pure GP cement mix	Fly Ash mix	LMG Residues Mix
7	43.5 MPa	34.5 MPa	35.0 MPa
14	48.2 MPa	43.2 MPa	47.0 MPa

Previous test work showed that the LMG cementitious material mix and the pure GP cement mix reacted in the same manner in the initial 7 day period. TSE and BG&E are investigating why this material has behaved differently from the earlier test work. Both the LMG cementitious material mix and the pure GP cement mix have surpassed the conventional fly ash mix in strength development by 14 days age. This appears to suggest that the fine grind and pozzolannic characteristics of LMG's cementitious material will produce an excellent compressive strength after 28 days and later.

LMG looks forward to reporting the full set of performance data at 28 and 56 days age together with additional test work carried out on this large sample.

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About Latrobe Magnesium

Latrobe Magnesium is developing a magnesium production plant in Victoria's Latrobe Valley using its world-first patented extraction process. LMG intends to extract and sell magnesium metal and cementitious material from industrial fly ash, which is currently a waste stream from brown coal power generation.

LMG has completed a pre-feasibility and an adjustment study validating its combined hydromet / thermal reduction process that extracts the metal. Production from its initial 5,000 tonne per annum magnesium plant is due to start at the end of 2016. The plant will be in the heart of Victoria's coal power generation precinct, providing immediate access to feedstock.

LMG plans to sell the refined magnesium under long-term contracts to Australian and American users. Currently, Australia imports 100% of the 10,000 tonnes annually consumed.

Magnesium has the best strength-to-weight ratio of all common structural metals and is increasingly used in the manufacture of car parts, laptop computers, mobile phones and power tools.

The LMG project is at the forefront of environmental benefit – by recycling power plant waste, avoiding landfill and is a low CO^2 emitter.