

11 September 2014

FOCUS ON HPA PRODUCTION FOLLOWING TECHNICAL REVIEW

Highlights

- AMMG focusing on becoming a producer of High Purity Alumina (HPA)
- Completed technical review of optimisation testwork and integrated plant study
- Reaffirmed technical viability of producing HPA product from low-impurity aluminous clay deposit
- Proven, robust acid leach process suited to producing HPA
- Growing global demand for HPA for LEDs, semiconductors, phosphor and industrial applications

Australia Minerals and Mining Group Limited (ASX: AKA) ("AMMG", "Company") is pleased to announce it has a clear strategy and focus on becoming a high purity alumina (HPA) producer. In his first major undertaking since his appointment as Managing Director last month, Mr Iggy Tan, a highly experienced mining executive and chemical engineer, has conducted a technical review of the previous AMMG testwork, proposed process flow design and integrated plant study to reaffirm the technical viability of producing HPA from the Company's substantial aluminous clay resources near Meckering, Western Australia.

HPA Production Strategy

The review concluded that most current HPA producers are using an expensive and highly processed feed stock material such as aluminum metal to produce 99.99% HPA quality product. AMMG are one of only two companies in the world that publicly report that they can produce 99.99% HPA product directly from an ore feed stock, such as aluminous clay. (Figure 1).

Figure 1 - AMMG HPA Process Vs Traditional HPA Production



Telephone: +61 8 9389 5557 Facsimile: +61 8 9389 5510 Website: www.ammg.com.au



The main advantage of this strategy is that AMMG are utilizing an abundant, low-cost aluminous clay ore feedstock which has already been purified and processed by natural weathering processes over many millions of years. As a result, the direct ore feed contains very low levels of impurities including iron, titanium, sodium, calcium, potassium and magnesium. The main impurity is insoluble silica which can be easily filtered out during the processing, leaving the soluble alumina.

By contrast, bauxite ore used to produce alumina and aluminum metal contains around 22% iron compared to the aluminous clay feed stock at Meckering, which contains 0.7% iron impurities (See Table 1). The recently completed Integrated Study OPEX and CAPEX figures has demonstrated that this relatively pure ore feedstock supports AMMG's business case to produce a high value, high margin product at significantly lower operating and capital costs than other global HPA competitors.

Table 1 - Typical Analysis of Ore Feed Stock

	Bauxite Darling Range (Typical)*	Canadian HPA Project (Typical)	AMMG Aluminous Clay ** (typical)
Al ₂ O ₃ (%)	34.5	22.77	30.5
SiO ₂ (%)	21.5	53.29	56.3
Fe ₂ O ₃ (%)	21.2	8.36	0.7
TiO ₂ (%)	2.00	0.98	0.7
K ₂ O (%)	0.24	3.41	0.2
CaO (%)	0.015	0.65	0.1
NaO (%)	0.005	1.42	0.1
MgO (%)	0.01	1.67	0.1
LOI (%)	18.1	-	-

^{*}Geochemical and mineralogical characteristics of bauxites, Darling Range, Western Australia, Applied Geochemistry

Processing Technology

The HPA process to be employed is a hydrochloric acid leach (HCL) process with gas induced crystallization and acid recovery. The main advantage of this technology is the simple recovery of acid, which is reused at the front end of the process, thereby reducing operating costs. The HCL process is a conventional, proven and robust chemical process that has been around since the early 1980's.

The HCL process works particularly well with AMMG's aluminous clay deposits at Meckering due to the unique low impurity aluminous clays, which allow the Company to produce a very pure alumina product. HPA is able to attract premium prices in a growing global market, driven by the massive growth in the use of LEDs, semiconductors, phosphor, industrial applications as well as sapphire glass in mobile phones and portable tablet devices.

HCL Process Technology – The Right Time

As mentioned previously, the HCL process employed by AMMG is well established technology developed since the early 1980's. In the 1980's, demand for HPA (>99.99%) was negligible compared to today, so the processing technology to produce HPA never advanced to commercial scale production.

Today HPA is used for synthetic sapphire glass production used in LEDs, the latest generation of smart phones, semiconductors, plasma screens, lithium batteries and optical devices. Sapphire glass has a number of physical attributes that make it suitable for a wide range of end markets including its hardness and resistance to physical damage, scratching and chemical erosion.

^{**} HPA Plant Feed



In just the smart phone sector, companies like Apple and Huwei have announced their intention to use sapphire scratch resistant glass (made from HPA) for their next generations of smartphones. Apple's \$578 million investment in sapphire glass technology company GTAT, suggests that Apple is committed to using sapphire in all its future iPhones.

Sales of Smartphones globally are estimated to exceed 1 billion annually by 2016. Similarly, the \$13B annual light emitting diode (LED) market continues to grow with more lighting, display, signs, TVs and motor vehicles moving to the much energy efficient LEDs, and is forecast to keep growing at >60% annually from 2013 to 2015, leading to robust growth in demand for HPA.

The Global High-purity Alumina market was valued at 19,040 tonnes in 2014 and is expected to increase to 48,230 tonnes by 2018, growing at a CAGR of 27.89 % according to Technavio Research¹.

Prices for HPA

As a result of the demand from the electronics and technology industries for very pure product, the price of the high purity alumina is also exponential with increasing product purity (See Figure 3). The cost to achieve the high purity alumina product requires extensive processing, quality control and technology to achieve these very tight specifications. AMMG believes that because their process takes it straight from a very pure ore to start with, the processing costs should be much cheaper.

Figure 3 – Typical Product Prices Range

Smelter Grade

Alumina

SGA 99.5%

\$0.4 per Kg

Right Place, Right Time, Right Feedstock, Right Technology

High Purity

HPA 99.9% (3N)

\$1 -10 per Kg

Alumina

Mr Tan said, "We have a robust and proven processing technology with enormous potential for producing HPA. Our focus is on moving away from minerals exploration to becoming an HPA producer. We are in the right place at the right time with the right feedstock and the right technology."

High Purity

HPA 99.99% (4N)

\$10-50 per Kg

Alumina

High Purity

HPA 99.999% (5N)

\$50-150 per Kg

Alumina

-End-



Ref 1 Technavio Global High Purity Alumina Market 2014-2018.

For more information, please contact:

Corporate

Iggy Tan Managing Director Australia Minerals & Mining Group Limited Tel (office): +61 8 9389 5557

Email: info@ammg.com.au

Media Contact

Tony Dawe Consultant PPR

Tel (office): +61 8 9388 0944 Email: tony.dawe@ppr.com.au

About AMMG (ASX: AKA)

AMMG is aiming to become the world's leading supplier of high purity alumina (HPA) (99.99% Al_2O_3) which is the major source material for scratch-resistant Sapphire glass, used in the next generation of iPhones and portable tablet devices. HPA is also used in the production of LED's, lighting devices, abrasives, ceramics and a growing range of industrial and technological processes. The global HPA market is approximately 25,000tpa and is expected to double over the coming decade.



Current HPA producers are using an expensive and highly processed feed stock material such as aluminum metal to produce HPA quality product. AMMG are one of only two companies in the world that can produce 99.99% HPA product directly from an ore feed stock, such as aluminous clay. AMMG has utilized well established chemical processing technology to extract HPA from its 100%-owned, low impurity aluminous clay deposit at Meckering, in Western Australia.

The Company has produced test quantities of 99.99% HPA product and is now advancing a Bankable Feasibility Study to develop a commercial production facility. AMMG is a chemical processing company using proven technology and processes to create a high margin product to meet the growing global demand for the next generation of electronics, telecommunication and industrial products.

Forward-looking Statements

This announcement contains forward-looking statements which are identified by words such as 'anticipates', 'forecasts', 'may', 'will', 'could', 'believes', 'estimates', 'targets', 'expects', 'plan' or 'intends' and other similar words that involve risks and uncertainties. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance and targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources are also forward looking statements. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions and estimates regarding future events and actions that, while considered reasonable as at the date of this announcement and are expected to take place, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Such forward-looking statements are mot guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of our Company, the Directors and management. We cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and readers are cautioned not to place undue reliance on these forward-looking statements. These forward looking statements are subject to various risk factors that could cause actual events or results to differ materially from the events or results estimated, expressed or anticipated in these statements.