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ALTECH – BATTERY MATERIALS COATING PLANT PFS PROGRESSING WELL AND ON TRACK

Highlights

- Process design completed
- Pricing of equipment and construction packages underway
- Environmental due diligence and permitting plan finalised
- 100% renewable power to be used
- Graphite market report completed
- MOU with leading European graphite supplier in place

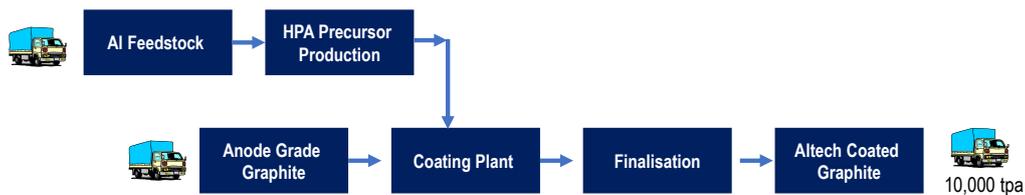
Altech Chemicals Limited (Altech/the Company) (ASX: ATC) (FRA: A3Y) is pleased to provide an update on the pre-feasibility study (PFS) for the construction of a battery materials high purity alumina (HPA) coating plant in Saxony, Germany. The PFS is being undertaken by Altech's 75% owned German subsidiary, Altech Industries Germany GmbH (AIG).

AIG is continuing to make solid progress. The PFS work has progressed to the engineering design phase for a 10,000 tpa battery materials coating plant, which the study is assessing. The plant would be constructed at the ~14 hectare industrial site that AIG has an option to purchase at the Schwarze Pumpe, Industrial Park, municipality of Spreetal in Saxony, Germany.

PFS work is now focussed on completion of the preliminary process design criteria and the sizing of the mechanical equipment required for each of the plant's process steps. An evaluation process of potential engineering and construction companies in the region has been completed, which is important for the project if it progresses to a definitive feasibility study. Enquiries have also commenced with suppliers for all major equipment packages for pricing purposes, and discussions with potential contractors for major works packages are underway.

The battery material coating process design has also now been completed. The process consists of four stages (see Figure 1). Stage 1 is a HPA precursor production step using an alternative aluminium feedstock. Stage 2 of the process is the receipt of the anode battery material (graphite) in bulk bags or drums. The next step is the HPA nano layer coating process which will take place in the coating section of the plant – this is the proprietary technology that Altech has developed. The last stage in the process is finalisation of the coated material, which is then packaged in either bulk bags or drums for shipment to end users.

Figure 1 – Battery materials coating plant train block flow diagram



As previously identified, the plant design shall integrate equipment which utilise 100% renewable energy from the European electricity market. Detailed discussions on options for supply and pricing of such green electricity have now been completed with local energy retailers for input to plant operating cost estimates.

A local environmental consultant has previously been engaged to complete an assessment of the site conditions and review of historical land use to identify any potential contamination or site remediation works which may be required prior to plant construction. No issues were identified. The consultant has also provided a plan and preliminary schedule for obtaining all necessary environmental and planning permits. The plant and equipment shall be designed in accordance with the local, federal and international environmental regulations in line with these permitting requirements.

The plant layout is being modelled on the Schwarze Pumpe site, and capital and operating cost estimates are being collected for financial modelling of the project. Key operating costs including electricity, water, natural gas, labour and transport have all been sourced.

A market report by Roskill has been completed for the electric vehicle (EV) industry, focussed on the growth of this industry in Europe. A forecast for graphite demand in the lithium-ion battery industry has also been completed. The global market for graphite anode materials is set to expand rapidly with estimates for planned battery Gigafactories in Europe (data from Roskill and Roland Zenn) between 280,000 and 350,000 tpa by 2025, and between 600,000 and 800,000 tpa by 2030.

To assist in the commercializing of its battery materials coating technology, Altech has executed a collaboration agreement with SGL Carbon SE of Germany, Europe's leading graphite producer.

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About Altech Chemicals (ASX:ATC) (FRA:A3Y)

Altech Chemicals Limited (Altech/the Company) is aiming to become one of the world's leading suppliers of 99.99% (4N) high purity alumina (Al₂O₃) through the construction and operation of a 4,500tpa high purity alumina (HPA) processing plant at Johor, Malaysia. Feedstock for the plant will be sourced from the Company's 100%-owned kaolin deposit at Meckering, Western Australia and shipped to Malaysia.

HPA is a high-value, high margin and highly demanded product as it is the critical ingredient required for the production of synthetic sapphire. Synthetic sapphire is used in the manufacture of substrates for LED lights, semiconductor wafers used in the electronics industry, and scratch-resistant sapphire glass used for wristwatch faces, optical windows and smartphone components. Increasingly HPA is used by lithium-ion battery manufacturers as the coating on the battery's separator, which improves performance, longevity and safety of the battery. With global HPA demand approximately 19,000t (2018), it is estimated that this demand will grow at a compound annual growth rate (CAGR) of 30% (2018-2028); by 2028 HPA market demand is forecast to be approximately 272,000t, driven by the increasing adoption of LEDs worldwide as well as the demand for HPA by lithium-ion battery manufacturers to serve the surging electric vehicle market.



German engineering firm SMS group GmbH (SMS) is the appointed EPC contractor for construction of Altech's Malaysian HPA plant. SMS has provided a USD280 million fixed price turnkey contract and has proposed clear and concise guarantees to Altech for plant throughput and completion. Altech has executed an off-take sales arrangement with Mitsubishi Corporation's Australian subsidiary, Mitsubishi Australia Ltd (Mitsubishi) covering the first 10-years of HPA production from the plant.

Conservative (bank case) cash flow modelling of the project shows a pre-tax net present value of USD505.6million at a discount rate of 7.5%. The Project generates annual average net free cash of ~USD76million at full production (allowing for sustaining capital and before debt servicing and tax), with an attractive margin on HPA sales of ~63%. (Refer to ASX Announcement "Positive Final Investment Decision Study for 4,500TPA HPA project" dated 23 October 2017 for complete details. The Company confirms that as at the date of this announcement there are no material changes to the key assumptions adopted in the study).

The Company has been successful in securing senior project debt finance of USD190 million from German government owned KfW IPEX-Bank as senior lender. Altech has also mandated Macquarie Bank (Macquarie) as the preferred mezzanine lender for the project. The indicative and non-binding mezzanine debt term sheet (progressing through due diligence) is for a facility amount of up to USD90 million. To maintain project momentum during the period leading up to financial close, Altech has raised ~A\$39 million in the last 24 months to fund the commencement of Stage 1 and 2 of the plant's construction; Stage 1 construction commenced in February 2019 with Stage 2 early works completed at the end of June 2020.

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 not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the 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.