7 February 2023

ALTECH – SILUMINA ANODES™ PROJECT UPDATE

Highlights

- Pilot plant construction progressing well and as planned
- Front end, wet plant largely completed and commissioning underway
- Long lead back end (dryer and calciner) under construction in South Africa
- Scheduled installation and commissioning mid-year
- DFS work progressing well on full-scale 10,000tpa plant

Altech Chemicals Limited (Altech/the Company) (ASX: ATC) (FRA: A3Y) is pleased to announce an update on its Silumina Anodes™ pilot plant project in Saxony, Germany, as well as an update on the Definitive Feasibility Study for the planned Silumina Anodes™ 10,000tpa plant.

The Company announced its game-changing technology of incorporating high-capacity high-purity alumina-coated silicon and graphite in lithium-ion batteries, and recently completed a Preliminary Feasibility Study for the construction of a 10,000tpa Silumina Anodes™ plant in Saxony, Germany, that includes an NPV of US$507M. Altech is in a race to get its patented technology to market. To support the development, Altech has commenced construction of a pilot plant adjacent to the proposed project site to enable the qualification process for its Silumina Anodes™ product.

Pilot Plant Update

Altech is pleased to advise that the construction of the Silumina Anodes™ pilot plant is progressing well and as planned. The pilot plant's front end, known as the wet circuit, is progressing well. The necessary infrastructure including power supply, building modifications, laboratory, and front-end wet circuit are nearing completion. The pilot plant is being housed in an existing building in Dock3 at Schwarze Pumpe, with the required building modifications and electrical panel infrastructure construction completed in the last quarter. See Figures 1-4 for images.

Fabrication of the back-end of the pilot plant, including the coating equipment, dryer, and calciner (longer lead times) is currently underway in South Africa and Europe. Whilst some back-end items such as the silicon carbide linings are being expedited, Altech anticipates that the final items will be installed and commissioned by Q3 this year.

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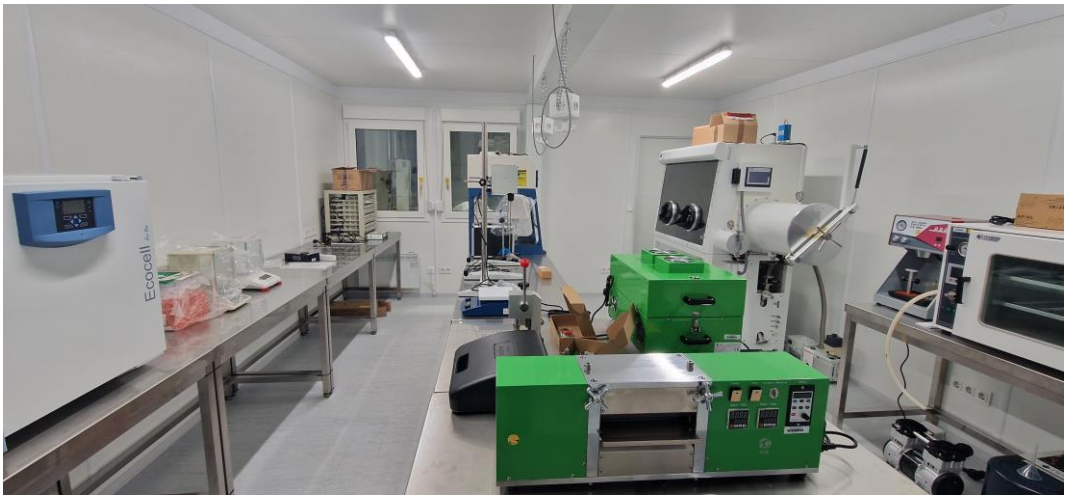

Figure 1 – Pilot Plant Laboratory

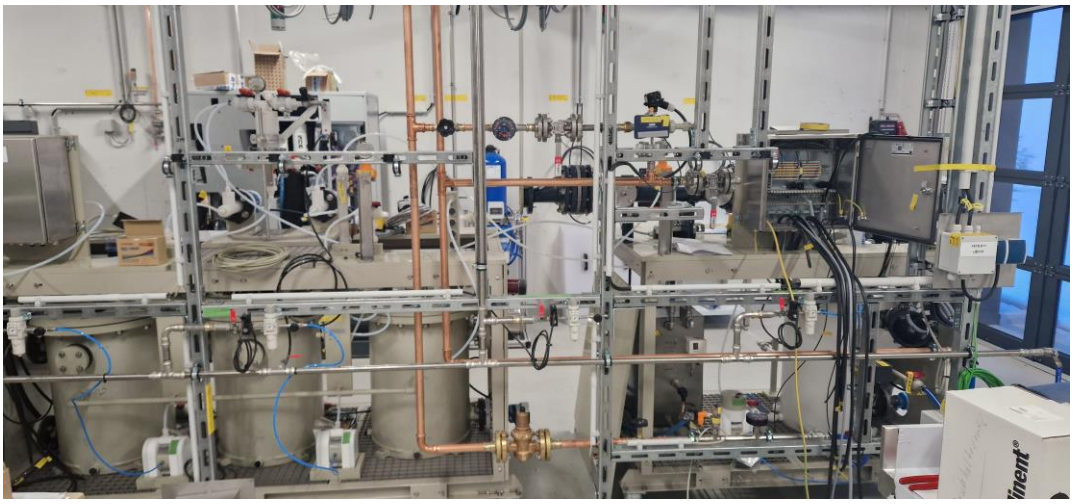

Figure 2 – Pilot Plant Vessels and Equipment

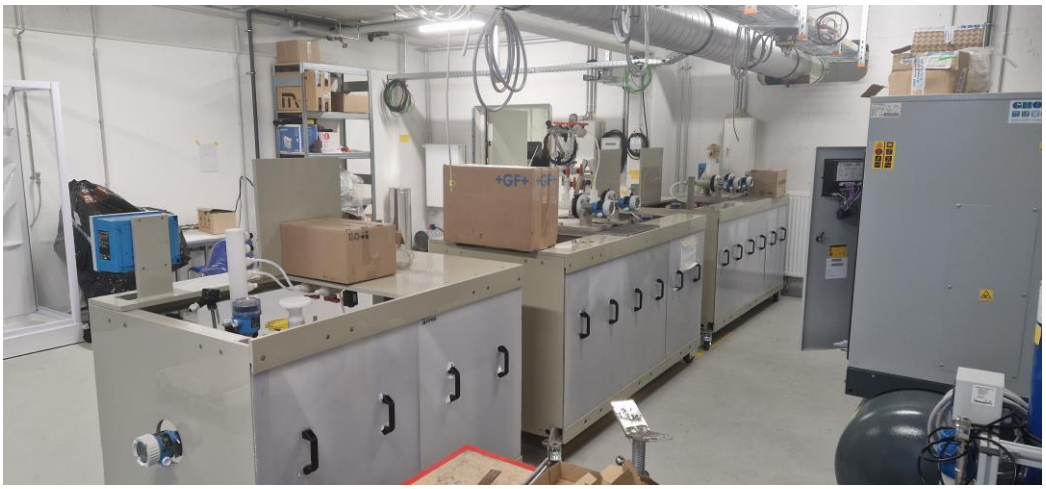

Figure 3 – Pilot Plant Test Equipment

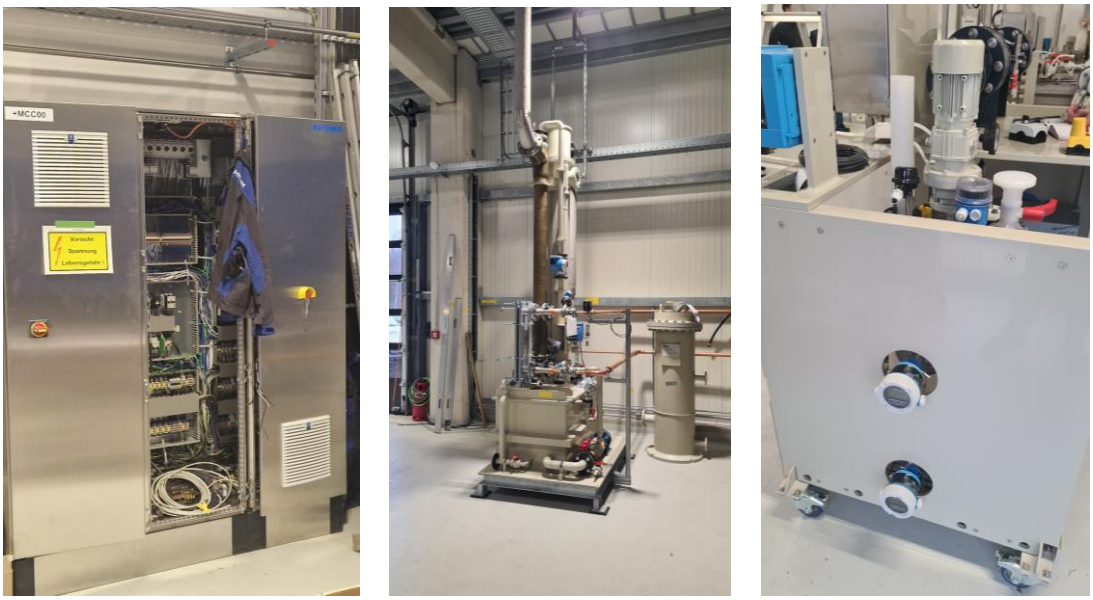

Figure 4 – Electrical Board and Various Equipment

Altech's pilot plant personnel have been recruited and trained in Germany, ready for the commissioning and start-up phase of the pilot plant. The commissioning of the front end of the pilot plant is currently underway. Aluminium chloride feedstock digestion, which will be used for the alumina coating process, will be commissioned in the subsequent weeks. The Kuettner engineering team is now focused on the development of commissioning and operational documentation. The pilot plant is designed to produce 120kg per day of the Silumina Anodes™ product, which will then be provided to selected potential end users for product testing.

Definitive Feasibility Study (DFS)

In anticipation of the pilot plant being commissioned, Altech is progressing with the Silumina Anodes™ 10,000tpa DFS by completing the phase 1 process definition. The DFS is running in parallel with the pilot plant construction, with Kuettner's detailed design team having transitioned from the pilot plant design to the DFS study. The mass and energy balance has been finalised, allowing for the progression of layouts and sourcing of production-scale vendor equipment to commence.

Altech also appointed ARIKON Infrastruktur GmbH (Arikon) to manage the approval process, site infrastructure requirements, and the balance of the plant. Arikon will be responsible for managing the application process and working with relevant regulatory bodies to obtain all necessary approvals for the project. This includes securing necessary permits and licenses, coordinating with local authorities, and arranging utility connections. Additionally, Arikon will be responsible for designing the site infrastructure requirements for the site.

- end -

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

CERENERGY® Batteries Project

Altech Chemicals Ltd is a specialty battery technology company that has a joint venture agreement with world leading German battery institute Fraunhofer IKTS ("Fraunhofer") to commercialise the revolutionary CERENERGY® Sodium Alumina Solid State (SAS) Battery. CERENERGY® batteries are the game-changing alternative to lithium-ion batteries. CERENERGY® batteries are fire and explosion-proof; have a life span of more than 15 years and operate in extreme cold and desert climates. The battery technology uses table salt and is lithium-free; cobalt-free; graphite-free; and copper-free, eliminating exposure to critical metal price rises and supply chain concerns.

The joint venture is commercialising its CERENERGY® battery, with plans to construct a 100MWh production facility on Altech's land in Saxony, Germany. The facility intends to produce CERENERGY® battery modules to provide grid storage solutions to the market.

ALTECH cerenergy®
Sodium Alumina Solid State Batteries

Silumina Anodes™ Battery Materials Project

Altech has licenced its proprietary high purity alumina coating technology to 75% owned subsidiary Altech Industries Germany GmbH (AIG), which has commenced a definitive feasibility study for the development of a 10,000tpa silicon/graphite alumina coating plant in the state of Saxony, Germany to supply its Silumina Anodes™ product to the burgeoning European electric vehicle market.

This Company recently announced its game changing technology of incorporating high-capacity silicon into lithium-ion batteries. Through in house R&D, the Company has cracked the "silicon code" and successfully achieved a 30% higher energy battery with improved cyclability or battery life. Higher density batteries result in smaller, lighter batteries and substantially less greenhouse gases, and is the future for the EV market. The Company's proprietary silicon graphite product is registered as Silumina Anodes™.

The Company is in the race to get its patented technology to market, and recently announced the results of a preliminary feasibility study (PFS) for the construction of a 10,000tpa Silumina Anodes™ material plant at AIG's 14-hectare industrial site within the Schwarze Pumpe Industrial Park in Saxony, Germany. The European graphite and silicon feedstock supply partners for this plant will be SGL Carbon and Ferroglobe. The project has also received green accreditation from the independent Norwegian Centre of International Climate and Environmental Research (CICERO). To support the development, AIG has commenced construction of a pilot plant adjacent to the proposed project site to allow the qualification process for its Silumina Anodes™ product. AIG has executed NDAs with two German automakers as well as a European based battery company.

Silumina Anodes™

HPA Production Project

Altech is also further aiming to become a supplier of 99.99% (4N) high purity alumina (Al_2O_3) through the construction and operation of a 4,500tpa high purity alumina (HPA) processing plant at Johor, Malaysia, and has finalised Stage 1 and Stage 2 construction of its HPA plant in Johor, Malaysia. Feedstock for the plant will be sourced from the Company's 100%-owned near surface kaolin deposit at Meckering, Western Australia and shipped to Malaysia. The HPA project is significantly de-risked with a bankable feasibility study completed, senior lender project finance from German government owned KfW IPEX-Bank approved, and a German EPC contractor appointed – with initial construction works at the site completed. In addition to the senior debt, conservative (bank case) cash flow modelling of the HPA plant shows a pre-tax net present value of USD 505.6million at a discount rate of 7.5%. The project generates annual average net free cash of ~USD76million at full production. Altech is in the final stages of project finance with a potential raising of US$100m of secondary debt via the listed green bond market. In addition, US$100m of project equity is being sought through potential project joint venture partners.