



**Altech Chemicals**  
Limited

## ASX ANNOUNCEMENT AND MEDIA RELEASE

12 September 2022

# ALTECH – SILUMINA ANODES™ PROJECT UPDATE

### Highlights

- Pilot plant implementation is well underway
- Procurement of pilot plant equipment is well advanced
- Long lead equipment already ordered
- Required building modifications and panel installation commenced in July 2022
- German Federal Chancellor Olaf Scholz visited Schwarze Pumpe site
- Altech's Silumina Anodes™ project was briefly introduced to the Chancellor
- Altech to present Silumina Anodes™ technology to Chancellery in Berlin

Altech Chemicals Limited (Altech/the Company) (ASX: ATC) (FRA: A3Y) is pleased to announce an update of its Silumina Anodes™ project in Saxony, Germany.

The Company recently announced late last year 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 a NPV of US\$507M. The Company is in the 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.

The pilot plant will produce 120kg per day of the Silumina Anodes™ product, which will then be provided to selected potential end users for product testing.

The pilot plant implementation is well underway and progressing to the expected timeframe. Procurement of pilot plant equipment is well advanced, with all long lead equipment already ordered. The pilot plant will be housed in an existing building in Dock3 at Schwarze Pumpe, and required building modifications and panel installation commenced in July 2022 in preparation for pilot plant construction to commence in October 2022. Detailed design is drawing to a close, with the Kuttner Engineering team focusing on the development of commissioning and operational documentation. The Company is pleased with the progress to date and preparing for pre-commissioning of the wet circuit when key equipment arrives.

In anticipation of the pilot plant commissioning, Altech have commenced the Silumina Anodes™ 10,000 tpa Definitive Feasibility Study (DFS) ahead of schedule. The DFS will run in parallel with the pilot plant construction, with the Kuttner Engineering detailed design team transferring to the DFS study. The mass

and energy balance from the PFS is currently being validated, with minor changes to the process design simplifying the process in certain areas. Once the final process design is finalised, process flow diagrams (PFDs) and piping and instrument diagrams (PIDs) will be established. Equipment specifications will be finalised and contact with specialized suppliers for firm and final quotes will begin. The Kuttner Engineering DFS team is in place and performing well.

### Other Site Update – Visit by German Chancellor

German Federal Chancellor HE Olaf Scholz visited the Schwarze Pumpe site in Saxony, Germany, heading a special delegation to boost economic development in this region. Schwarze Pumpe is the site of Altech's Silumina Anodes™ battery materials project. The delegation included three State Prime Ministers, being Mr Michael Kretschmer of Saxony, Mr Dietmar Woidke of Brandenburg, Mr Reiner Haseloff of Saxony-Anhalt, as well as the special State Minister for Eastern States Industrial / Economic Development Mr Carsten Schneider. Altech's Silumina Anodes™ project was briefly introduced to the Chancellor by Altech's German Managing Director Mr Uwe Ahrens.



German Federal Chancellor HE Olaf Scholz (centre) at Altech's Silumina Anodes™ site in Schwarze Pumpe  
*Photo courtesy of Mirko Kolodziej*



German Federal Chancellor HE Olaf Scholz wished Altech's German Managing Director Mr Uwe Ahrens well with the project

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During the delegation meeting, Chancellor Olaf Scholz met with the State Ministers of Saxony, Saxony-Anhalt and Brandenburg. The visit to the Dock3 incubator centre in the Schwarze Pumpe Industrial Park, where Altech's Silumina Anodes™ project is situated, was in relation to an interim assessment of structural strengthening within the east German coal regions, and to develop the Government's continuing support for these regions. Following his meeting with the State Ministers, Chancellor Scholz drew a positive interim assessment of structural strengthening within these regions over the next two years. Chancellor Scholz was impressed by the results achieved so far and by the projects being developed within the regions. The exchange with the Chancellor, State Ministers and the East Representative of the Federal Government, Mr Carsten Schneider, was significant for Altech. The Company's Silumina Anodes™ project relates to higher battery efficiency for the German electric vehicle industry. For Chancellor Scholz, reliable and safe energy production in Germany is of the utmost importance for the future. Energy security remains a significant concern within Germany and represents a key focus of the Government.



**Federal Chancellor HE Olaf Scholz of Germany (centre), State Prime Ministers Mr Dietmar Woidke of Brandenburg (far left), Mr Reiner Haseloff of Saxony-Anhalt (second from left), Mr Michael Kretschmer of Saxony (second from right) and Special State Minister Mr Carsten Schneider (far right)**

The Federal Government, and German politics as a whole, is responsible for the promised investments of EUR40 billion to these regions and industries. This represents the largest federal investments in Germany, said Mr Schneider, East Representative of the Federal Government.

Altech is currently progressing with applications for various federal and state grants under the battery development program, as well as other infrastructure and regional financial support programs, in relation to the Silumina Anodes™ project, within the framework of the European Battery Alliance, Structural Development Funds and other special programs initiated by the Federal State of Germany.

Altech's Silumina Anodes™ game changing technology is considered as a key project for industrial development for the State of Saxony, as well as Germany at large. The growing interest in Altech's Silumina Anodes™ product by the European battery and car industry has led to higher political interest, and more importantly, political and economic support.





Altech has been invited to present its technology and Silumina Anodes™ project to the Federal Government of Germany through its Special Task Force of the Chancellery, led by Mr. Carsten Schneider, Minister of State and Federal Government Commissioner for East Germany.

Altech's German Managing Director Mr Uwe Ahrens stated *"With the blessing of the German Chancellor, as well as with the State Minister, Altech looks forward to significant support for the Silumina Anodes™ project in Schwarze Pumpe. It is pleasing to be able to present Altech's projects to the Chancellery in Berlin, and I am very much looking forward to it and am optimistic for the outcome"*.

**Special Task Force of the Chancellery,  
Mr. Carsten Schneider  
with Altech's German MD. Uwe Ahrens**

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

Altech Chemicals (“Altech” or “Company”) is a specialty battery materials technology company that 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 in 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 Annodes™.

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 Anode™ 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 Project**

Altech is also further aiming to become a supplier of 99.99% (4N) high purity alumina (Al<sub>2</sub>O<sub>3</sub>) 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.

