



**Altech Chemicals**  
Limited

## ASX ANNOUNCEMENT AND MEDIA RELEASE

26 October 2022

# ALTECH – APPOINTMENT OF LEADEC AS LEAD ENGINEERING COMPANY FOR THE CERENERGY® 100MWh PROJECT

### Highlights

- Appointment of German Leadec Automation & Engineering GmbH
- Lead engineering company for CERENERGY® 100MWh Battery DFS
- Highly experienced in cell production, module and pack production design
- Leadec project team have completed Fraunhofer site visits and a kick off workshop
- Engineering work has commenced and progressing well

Altech Chemicals Limited (Altech/the Company) (ASX: ATC and FRA: A3Y) is pleased to advise that it has appointed leading German company Leadec Automation & Engineering GmbH (Leadec) as the lead engineer for the Definitive Feasibility Study in relation to its CERENERGY® 100MWh Sodium Alumina Solid State Battery project for grid energy storage, to be constructed in Saxony, Germany.

Leadec is a leading global service specialist for factories across their entire life cycle and related infrastructure. For 60 years, the German company has been supporting customers in the manufacturing industries: from planning, installation, and automation of the factories. Leadec has been supporting OEMs and suppliers in the field of battery production and e-mobility for many years. The company has covered the complete spectrum from cell production, module and pack production to solutions in the area of recycling and battery disassembly. Leadec employs about 20,000 people worldwide and their on-site teams are based at more than 300 locations globally.

On 14 September 2022, Altech announced a JV Agreement with the world-leading German battery institute Fraunhofer IKTS ("Fraunhofer") to commercialize Fraunhofer's revolutionary CERENERGY® Sodium Alumina Solid State (SAS) Battery. Altech will be the majority owner at 75% of the JV company, which will commercialize a 100 MWh project to be constructed on Altech's land in Schwarze Pumpe, Germany. CERENERGY® batteries are the game-changing grid storage 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. Leadec have already appointed a highly experienced project team, and site and technology visits to Fraunhofer IKTS have already been completed. The Leadec team have commenced the engineering work

with steady progress, after attending a two-day project workshop in Schwarze Pumpe, facilitated by Managing Director, Iggy Tan.

In relation to the appointment, Altech Managing Director Iggy Tan stated *"We are pleased to appoint Leadec as lead engineer for Altech's CERENERGY® 100MWh project. Leadec has extensive battery manufacturing experience and will play a key part in advancing the Definitive Feasibility Study to commercialise the CERENERGY® Sodium Alumina Solid State Batteries".*



Leadec Managing Director Mr Frank Seifert shown here with Altech MD Iggy Tan, having executed the Services Agreement at Altech's CERENERGY Project at Schwarze Pumpe in the state of Saxony, Germany

### Altech Chemicals Interactive Investor Hub

Engage with Altech directly by asking questions, watching video summaries and seeing what other shareholders have to say about this, as well as past announcements, at our Investor Hub <https://investorhub.altechchemicals.com>

– end –

Authorised by: Iggy Tan (Managing Director)

For more information, please contact:

**Corporate**

**Iggy Tan**

Managing Director

Altech Chemicals Limited

Tel: +61 8 6168 1555

Email: [info@altechchemicals.com](mailto:info@altechchemicals.com)

**Martin Stein**

CFO & Company Secretary

Altech Chemicals Limited

Tel: +61 8 6168 1555

Email: [info@altechchemicals.com](mailto:info@altechchemicals.com)

## 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 ("IKTS") 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.



### **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 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.



### **HPA Production 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.