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ABB and Altilium sign agreement to work on battery industry recycling projects

- ABB and Altilium sign a Memorandum of Understanding to explore automation, electrification and digital solutions for European battery recycling plants
- ABB technologies could be deployed in planned UK plant that will meet 20 per cent of the country's demand for battery materials

ABB has signed a Memorandum of Understanding (MoU) agreement with UK-based clean technology group Altilium to jointly explore how the integration of automation, electrification and digital technologies in plants across Europe can support the scaling up of battery materials recycling. Altilium is developing green processing technologies and building infrastructure at scale for the recycling of metals and electric vehicle (EV) battery waste, with the aim of ensuring a domestic supply chain of low-carbon battery materials for the automotive industry.

ABB will introduce the design and delivery of control systems equipment and solutions for the distribution and management of electrical power for Altilium's UK pilot battery recycling scheme, which will produce battery-ready cathode active material (CAM) from used EV batteries. The global technology leader will also explore the use of its ABB Manufacturing Operations Management (MOM) and Manufacturing Execution System (MES) digital applications. Such integrated automation standardizes and optimizes processes with intuitive interfaces and edge data collection.

The two companies plan to extend their work into commercial plants. This includes the retrofit of Altilium's European Solvent Extraction-Electrowinning (SX-EW) facility in Eastern Europe, which will start processing battery waste in 2024; and development of a planned UK plant in Teesside from 2026 that will create 20 per cent of the country's required CAM, making it one of the largest projects in the region.

"Teaming up with ABB aligns perfectly with our commitment to redefine battery recycling for clean energy transportation," said Dr Christian Marston of Altilium. "This is just the beginning of our journey toward closing the loop in battery manufacturing and decarbonizing automotive supply chains."

"By combining our expertise in automated control systems, electrification and digital technology with Altilium's approach to battery recycling, we are well positioned to drive positive change in the EV industry," said Staffan Sodergard, Global Product Line Manager for Battery Manufacturing, ABB. "This is an important agreement in the vital and growing field of battery recycling, where ABB continues to build expertise with ambitious battery industry customers and partners."

World Economic Forum figures show the demand for batteries is expected to increase 14-fold by 2030 due to the adoption of electric vehicles. As increasing number of these batteries reach end-of-life, it is critical they are recycled to ensure the reliable, sustainable supply of critical minerals.

ABB's technology and approach will allow Altilium to speed up its time to market, supporting the provision of scalable solutions as the company expands its operations, and will significantly reduce the carbon footprint of EV batteries,

aligning with both companies' commitment to a greener future. It is the latest example of ABB's technology being put to good use in the recycling of used batteries.

Altilium opened its EV Battery Recycling Technology Centre in Devon in 2022 and is currently the only company in the UK producing CAM recovered from EV battery waste. Its first European plant will recycle battery waste from over 24,000 vehicles a year, while the UK facility, to be located in Teesside, will process waste from over 150,000 EVs per year, producing 30,000 metric tons of CAM.

ABB's Process Automation business automates, electrifies and digitalizes industrial operations that address a wide range of essential needs – from supplying energy, water and materials, to producing goods and transporting them to market. With its ~20,000 employees, leading technology and service expertise, ABB Process Automation helps customers in process, hybrid and maritime industries improve performance and safety of operations, enabling a more sustainable and resource-efficient future. go.abb/processautomation

ABB is a technology leader in electrification and automation, enabling a more sustainable and resource-efficient future. The company's solutions connect engineering know-how and software to optimize how things are manufactured, moved, powered and operated. Building on more than 130 years of excellence, ABB's ~105,000 employees are committed to driving innovations that accelerate industrial transformation.

Altilium is a UK-based clean technology group that will reshape the UK and European automotive supply chain by offering high volume, domestic and low carbon sources of cathode and anode materials from recycling waste streams already in circulation, such as lithium scrap and mine waste. In 2022, the company opened its Electric Vehicle Battery Technology Centre in Devon, to deepen and strengthen its competitive edge in the recycling of lithium-ion batteries. This scale-up processing line will provide the company with data to make informed decisions on materials handling, scalability, and product quality at the UK's largest planned EV battery recycling facility, to be located in Teesside.

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