BMW GROUP
Werk Leipzig

Press Information
1 February 2023

Expansion of E-component production in Leipzig: First cell coating line for battery modules goes on stream

+++ First of five cell coating lines is launched +++ Leipzig to run complete high-voltage battery production process by 2024 +++ In-house production of e-components for the fully electric MINI Countryman +++

Leipzig. BMW Group Plant Leipzig's first cell coating line has gone into series operation as e-component production at the site continues to gain momentum. By 2024 the two existing module assembly lines will be complemented by a third, as well as four more cell coating lines and two more high-voltage battery assembly lines. The four coating lines will enter series operation during the course of this year at roughly two-month intervals.

"From 2024 our plant here in Leipzig will be able to run the entire process chain for high-voltage battery production," said Markus Fallböhmer, head of Battery Production at the BMW Group. "So we will be making an important contribution to the transformation to electromobility." To meet its goal of fully electric vehicles accounting for at least half of all sales by 2030, the BMW Group is investing more than €800 million to establish and develop e-component production at BMW Plant Leipzig.

More than 2,000 coated cells an hour

Covering 2,300 m^2, the new cell coating system at the BMW plant in Leipzig is located in the former production hall of the BMW i3, where production was phased out in the summer of last year. Straight afterwards the space was converted for e-component manufacturing in less than six months, and associates underwent the relevant training.

The new coating line can handle more than 10 million cells a year, or over 2,300 an hour. The coated cells are then used on the battery module production line in Leipzig, to make modules for the fully electric BMW i4* and BMW iX1*. A further line at the facility is producing battery modules for the BMW iX*.

Press Information
1 February 2023

From cell coating to high-voltage battery

High-voltage battery production happens in three stages: cell coating, module production and assembly of the battery itself. The processes are highly automated.

The BMW Group sources its cells from partners who manufacture them exactly to specification. The type that is used depends on the vehicle concerned and is chosen to ensure the best possible characteristics.

Coating lithium-ion cells consists first of pre-treating and patterning their surfaces with a laser. This involves the laser beam "chiseling" a texture into the outside of the uncoated cell to increase its surface area and reduce the surface tension of the aluminium casing. Next, the cells are plasma-cleansed to remove any dirt particles and oxides. Together, these two processes improve the adhesiveness of the surface, ready for the coating to be applied. It is administered by a specially developed machine that coats the cells in two layers, which are then hardened by UV and offer the best possible insulation for the cells. Finally, a fully automated three-stage quality control process is carried out in which the thickness and surface quality of the coating are inspected. A high-voltage test is conducted to ensure the coating is completely free from defects.

The cell coating used at the BMW Group is blue, which was deliberately chosen for its important role in the positioning of electric BMW i vehicles and as the signal colour of the range. Within the BMW Group production network, Plant Leipzig is a pioneer in electromobility, having produced the company's first fully electric model, the BMW i3, from 2013 to 2022.

Once coated, the battery cells are assembled into larger units known as modules. When completed, these are fitted into a aluminium housing along with the control and cooling units and the connectors that will connect them to the vehicle. The size and shape of the housing and the number of modules inside depends on the vehicle variant. That way, each car receives the most suitable high-voltage battery.

A secure future for BMW Group Plant Leipzig

The continued expansion of Plant Leipzig is very much driven by e-component production, which will take up some 150,000 m^2 of manufacturing space in the future. "This is a long-term investment in the future of the Leipzig plant," emphasised Plant Director Petra Peterhänsel, adding that the expansion of the

Press Information
1 February 2023

plant would not only safeguard current jobs but also create new ones. "At present, more than 800 employees work in e-component production at our Leipzig site. By 2024 there will be more than 1,000."

The next great milestone for Plant Leipzig will be production of the MINI Countryman successor, which will roll off the production lines from the end of this year. The crossover will be available with a choice of combustion engines or a fully electric drive – powered by high-voltage batteries made in Leipzig.

***Electricity consumption and range:**
BMW iX: Electricity consumption in kWh/100 km: 24.7-19.4 (WLTP); electric range (WLTP) in km: 408-630
BMW i4: Electricity consumption in kWh/100 km: 22.5-15.8 (WLTP); electric range (WLTP) in km: 406-589
BMW iX1: Electricity consumption in kWh/100 km: 18.1-16.8 (WLTP); electric range (WLTP) in km: 417-440

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Press Information
1 February 2023

The BMW Group Plant Leipzig

The BMW Group plant in Leipzig is one of the most modern and sustainable car factories in the world. Series production began in March 2005. Today, around 1,000 vehicles roll off the production line here every day, currently the BMW 1 Series, the BMW 2 Series Gran Coupé and the BMW 2 Series Active Tourer. The BMW Group has already invested a total of more than three billion euros in the Leipzig location. The core workforce currently comprises around 5,300 employees.

Internet: www.bmw-werk-leipzig.de
Instagram: https://www.instagram.com/bmwgroupwerkleipzig

The BMW Group

With its four brands BMW, MINI, Rolls-Royce and BMW Motorrad, the BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. The BMW Group production network comprises over 30 production sites worldwide; the company has a global sales network in more than 140 countries.

In 2022, the BMW Group sold nearly 2.4 million passenger vehicles and more than 202,000 motorcycles worldwide. The profit before tax in the financial year 2021 was € 16.1 billion on revenues amounting to € 111.2 billion. As of 31 December 2021, the BMW Group had a workforce of 118,909 employees.

The success of the BMW Group has always been based on long-term thinking and responsible action. The company set the course for the future at an early stage and consistently makes sustainability and efficient resource management central to its strategic direction, from the supply chain through production to the end of the use phase of all products.

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