

Media Information
19 November 2024

BMW Group Competence Centre for Battery Cell Production in Parsdorf awarded European environmental certification EMAS

+++ BMW Group site in Parsdorf presents first environmental impact report +++
Award for CMCC and test-parts logistics in Parsdorf +++ Site meets the strict requirements of EMAS +++

Munich/Parsdorf. With the publication of its first environmental impact report, the new BMW Group Competence Center for Battery Cell Manufacturing (CMCC) in Parsdorf has been awarded EMAS certification. The acronym EMAS stands for European Eco-Management and Audit Scheme, which claims to be the most stringent environmental management system in the world. The certification was presented to Bernd Wächtershäuser, Director of the CMCC in Parsdorf, on 18 November. Speaking during a visit by the Chamber of Industry and Commerce (IHK) for Munich and Upper Bavaria, Wächtershäuser said: "We are very pleased to receive this award, which underlines the fact that our processes operate on a very high level, in both economic and environmental terms. The entire team has done an excellent job in achieving this certification."

The CMCC in Parsdorf is where the BMW Group manufactures prototype cells of the kind that will be used in the Neue Klasse models from 2025. It is also a manifestation of the company's pioneering role in battery cell technology. "Economic success and sustainable operations are not a contradiction," said Manfred Gößl, Managing Director of the IHK for Munich and Upper Bavaria at the presentation of the certificate. "Quite the opposite, in fact – as is evidenced by every facility pursuing EMAS certification. The IHK would like to congratulate the BMW Group Competence Centre in Parsdorf on this milestone."

CMCC Parsdorf: Efficient operations, and concepts for the cell cycle

The EMAS certification underlines the rigorous environmental standards that govern operations at the CMCC in Parsdorf. Its technical systems for battery cell production have been subject to an immission control approval procedure, and the

site was found to meet all requirements and specifications. The CMCC is powered by non-fossil energy from 100% renewable sources. Natural gas was deliberately rejected as a source of power, and the building is instead supplied with regenerative heat thanks to state-of-the-art groundwater and air source heat pumps. Hot water for process ventilation is obtained highly efficiently, via the waste heat from various primary processes. "Pilot production focuses on reducing consumption of critical raw materials and energy, avoiding solvents and developing innovative approaches to support circular raw materials for batteries," Wächtershäuser explained. Raw materials are a significant cost factor in cell production, so using them efficiently and responsibly is essential in terms of both economic and environmental considerations. The CMCC in Parsdorf is also helping the BMW Group learn more about how to further optimise the use of resources. Wherever technically feasible, residual materials generated during the production process are fed into the material loop. Active materials incorporate a significant share of recyclates.

EMAS certification: Strict requirements and high environmental standards

To obtain EMAS certification, businesses must fulfil stringent requirements and comply with rigorous environmental standards. EMAS is a globally recognised standard that helps companies to manage and continuously improve their environmental impact. A key part of the EMAS environmental management system consists of the international environmental management standard ISO 14001. EMAS also focuses on measurable improvements, transparency and legal security. The aim of the certification is to help companies continuously improve their environmental performance, for example by using energy and material more efficiently and reducing emissions, wastewater and waste from their sites. Besides these direct environmental impacts, EMAS focuses on indirect aspects, such as the environmental compatibility of products, procurement and supply chains, contractors' conduct, and recording and evaluating the impact of employees commuting to work.

(Source: <https://www.umweltbundesamt.de/themen/wirtschaft-konsum/wirtschaft-umwelt/umwelt-energiemanagement/emas-umweltmanagement-guetesiegel-der-europaeischen#systematisches-umweltmanagement-mit-emas>)

How a battery cell is made: The stages of prototype production at the CMCC

Cell production at CMCC in Parsdorf starts with the manufacture of the electrode. The basic materials – including graphite for the anode and nickel oxides for the cathode – are dosed and mixed with binders and solvents in exact ratios to create what's known as slurry. This is then used to coat wafer-thin metal foils and compress them after drying, in a process known in the business as calendaring. In calendaring, maximum precision is vital, as the foil is just a few micrometres thick, thinner than the threads of a spider's web, and the coating is also in the micrometre range. The coated foils – or calendared electrodes – then move on to cell assembly, where they are wound into "jelly rolls" with the separator and inserted into the cell housing. The cells are then filled with electrolyte, charged for the first time and tested for function and quality.

Parsdorf prototypes: New cell format and advanced cell chemistry

Battery cells determine the key characteristics of electric vehicles: range, mileage and charging time. The new cylindrical cell by BMW is specially designed for the electric architecture of the Neue Klasse models and can significantly increase range by up to 30 percent (according to WLTP) – possibly even more, depending on the model. It has a uniform diameter of 46 millimetres and comes in two different heights: 95 and 120 millimetres. The nickel content is higher than that of BMW's fifth-generation battery cells and the cobalt content is lower. On the anode side, the silicon content is higher, meaning an increase in volumetric energy density in the cell of more than 20 percent. The high-voltage battery, drive and charging technology of the Neue Klasse will have a higher voltage of 800 volts. One advantage of this is that it optimises the feed-in of energy at DC fast-charging stations.

Corporate Communications

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Transparent reporting: Environmental impact statement now online

The environmental impact statement of the BMW Group's CMCC and test-parts logistics in Parsdorf has been independently reviewed by TÜV SÜD

Umweltgutachter GmbH and is now available online at (in German only):

https://www.bmwgroup.com/content/dam/grpw/websites/bmwgroup_com/responsibility/downloads/de/2023/Umwelterklaerung_2023_Parsdorf.pdf

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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 2023, the BMW Group sold over 2.55 million passenger vehicles and more than 209,000 motorcycles worldwide. The profit before tax in the financial year 2023 was € 17.1 billion on revenues amounting to € 155.5 billion. As of 31 December 2023, the BMW Group had a workforce of 154,950 employees.

The success of the BMW Group has always been based on long-term thinking and responsible action, from the supply chain through production to the end of the use phase of all products.

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