

VW Caminhões e Ônibus and CBMM sign an unprecedented partnership for the development of automotive batteries with Niobium

Volkswagen Caminhões e Ônibus, a pioneer in the development and serial production of electric trucks in Latin America, and CBMM, world leader in the production and sale of Niobium products, enter into a new partnership to encourage electric mobility. The agreement aims to develop and apply ultra-fast recharge batteries for use in electric vehicles designed by the automaker. The use of <u>niobium</u> for this purpose is unprecedented in the global automotive industry.

"For the past three years, we have been accumulating experience in electrification and now we will apply this expertise to enable a new battery technology. Our e-Mobility development center in Resende will use our patented modular architecture for electric vehicles to expand the platform, which started with e-Delivery, and is now moving towards new models. This alliance with CBMM will be another important link towards the mobility of the future. Our objective is to create an ultra-fast recharge solution, pioneer in Latin America", evaluates Roberto Cortes, President and CEO of Volkswagen Caminhões e Ônibus.

The agreement with CBMM is strategic, as the company is consolidated as a world reference in the development of new technologies with Niobium for lithium ion batteries, with the potential to provoke profound changes in the industry in the coming years. Volkswagen Caminhões e Ônibus will use its expertise to establish the behavior of these batteries in the vehicle, with all the safety and quality parameters to achieve the expected performance.

"This partnership shows what two great global companies can do when they work together. Volkswagen Caminhões e Ônibus' experience in the production of commercial vehicles, added to our knowledge in the development of innovative technologies with Niobium, result in an important step towards transforming the way we move, contributing to a more <u>sustainable mobility</u>", says Ricardo Lima, Vice President of CBMM.

The company executive adds: "the technology that will be used in the batteries is the result of more than three years of research and development in partnership with Toshiba, in Japan. For the first time we are implementing this solution, which, due to the use of Niobium oxide in the battery anode, will allow an ultra-fast charging operation in less than 10 minutes, greater durability, lifetime and safety. This is, without a doubt, an important milestone for CBMM and for Brazil".



To realize all these benefits in the application, Volkswagen Caminhões e Önibus will develop the controls for operating the Niobium battery in the vehicle. "There are passenger transport modes, such as buses, that require fast loading, and this new technology has great potential to meet these demands in an efficient manner," says Roberto Cortes.

In addition to the battery interface and parameters, the automaker will develop and manufacture the 100% electric vehicles that will be used in this project. During the testing phase, VWCO will monitor and acquire real-time data, conducting vehicle application studies. It is also in charge of implementing the ultra-fast charging infrastructure and preparing the entire chain with driver training, safety guidelines and support in the development of bodies.

About VW Caminhões e Ônibus

A member of the TRATON Group, VW Caminhões e Ônibus is the manufacturer of commercial vehicles Volkswagen and MAN, one of the largest manufacturers of trucks and buses in Latin America. Since 1981, when it started operations, reaching the top of the market, respecting and satisfying customers' needs, has always been the focus of the automaker. And that is exactly what it offers its customers: bespoke products and excellent after-sales service. The company is also a reference in technological innovations. The company always seeks solutions that reduce the environmental impact and help to preserve the environment. For more than 40 years, the manufacturer has maintained its commitment to develop vehicles that exceed customer requirements - wherever they run, whether on Brazilian, Latin American or African roads.

About CBMM

World leader in the production and marketing of niobium products, CBMM has more than 400 customers in more than 50 countries. Headquartered in Brazil, with offices and subsidiaries in China, the Netherlands, Singapore, Switzerland and the United States, the company provides cutting-edge products and technology to the infrastructure, mobility, aeronautics and energy sectors. Founded in 1955, in Araxá, Minas Gerais, CBMM has a technology program that expands the applications of niobium and contributes to the growth and diversification of this market. In line with its New Business plan, in 2019, the company invested in 2DM, a company based in Singapore, dedicated to the production of graphene. As early as 2021, CBMM invested in the British startup Echion, with the objective of accelerating innovations in the automotive electric battery front.