

BILFINGER TEBODIN



BILFINGER



Photo credit: Michelin

Sustainable Solutions for the Automotive Industry: Bilfinger Tebodin supports Michelin in their sustainable journey

The consulting and engineering company Bilfinger Tebodin traditionally serves the original equipment manufacturers (OEM), Tier 1 & Tier 2 and tire producers. In recent 10 years, Bilfinger Tebodin has carried out projects for over 150 automotive plants in Central and Eastern Europe. Currently, the industry is booming with projects related to e-mobility developments, such as new tire technologies and batteries production. Within these projects, automotive players meet chemical industry specifics and shape a completely new market.

In Romania, the revenue of the automotive industry has constantly been increasing over the last five years and was significantly influenced by the pandemic in 2020 with a revenue decrease. Still, major investors keep developing their projects. Bilfinger Tebodin experts notice an increase in sustainable developments investors are implementing at their existing and future facilities. It's no wonder, as being a part of the European Green Deal, Romania has its own renewable targets for 2030.

Michelin reducing CO2 emissions

Michelin decided to reduce CO2 emissions in all their factories to enable sustainable tire production. Supporting energy transition, Bilfinger Tebodin followed this challenge and implemented future-proof HVAC technical solutions for Michelin trucks tires factory in Zalau, Romania.

Michelin, the leading tire company, is dedicated to improving the mobility of goods and people by manufacturing and marketing tires and services for every type of vehicle. Headquartered in Clermont-Ferrand, France, Michelin is present in more than 170 countries, has 111,200 employees and operates 67 production plants in 17 different countries. The company's ambition is to get all-sustainable by 2050, which is why they asked Bilfinger Tebodin to propose a technology that will help to achieve this goal.

Bilfinger Tebodin's solution is based on using electrical energy instead of gas in order to eliminate CO2 emissions. This will be achieved by installing heat pumps instead of gas boilers for all HVAC systems at the client's facility. We are Michelin's EPCM partner to deliver a basic design study, a tender technical package, organize and manage procurement for an EPC contractor and prepare permitting documentation to obtain a building permit. After an EPC contractor is selected, Bilfinger Tebodin will provide PMC services to monitor detailed design, procurement, and site activities of the EPC company.

"We are proud to have a long-term relationship between Michelin and Bilfinger Tebodin in various countries. Among other projects, we were engaged in a logistic complex in Davydovo,

Russia and an expansion of a production plant in Pirot, Serbia. Bilfinger Tebodin provides a full scope of services for partners using our vast experience in tire production," Madga Zemanova, Automotive market leader in Central & Eastern Europe, said.

On the current project, an international venture team of twenty Bilfinger Tebodin's engineers and architects from Romania and Ukraine is engaged. This enabled them to develop the basic design studies and to evaluate various technical options within the strict schedule. Timing is especially important for Michelin, as they plan to have the tire facilities modernized until 2023. The new buildings were designed fully in BIM, which also made engineering faster and enhanced the quality of construction. The result was the evaluation of the entire existent factory and a significant upgrade of production processes. Right now, the construction is in progress.

Europe aims at e-mobility hubs

Electromobility, or e-mobility, is a solution that grants us sustainable future with CO2 neutral mobility. According to the International Energy Agency, electric vehicles will have a market share of around 30% by 2030, implying 34 million e-cars on the road. This transition has started already with industrial players creating our future right now and Bilfinger Tebodin is supporting this move. Recently, in Central and Eastern Europe, the company has been awarded 10 contracts for over 7.2 million euro for projects related to e-mobility. Those include all types of products to serve electric vehicles – from raw materials to final battery assemblies.

"For Europe, the expected demand for produced EV batteries is 200 GWh annually by 2023, and 500 GWh by 2030. 90% of European EV batteries



have been produced in Asia, and now we are glad to support new investors aiming to create a self-sufficient local supply chain,” Magda Zemanova, Automotive market leader in CEE at Bilfinger Tebodin, added.

The EV battery business is not only about the final batteries’ assembly, but also about raw materials processing and more demanding chemical production of battery components such as cathodes, anodes, electrolytes, and separators. Thanks to new EV battery plants springing in Europe, the EU expects to have a 16% share of the 2,550 GWh global battery market by 2029 compared to just under 6% of today’s 450 GWh.

The major investments are in Germany, Poland, and Hungary. “We expect impressive announcements from other countries like Serbia or other Eastern countries, which would be nice production locations for the European market and East-European OEMs (original equipment manufacturers). As for Central Europe, we see a bid interest in the Czech Republic as a hub for R&D centres,” says Magda.

Having over 60 years of experience in automotive business and a long-term track of chemical projects, Bilfinger Tebodin is now running four projects for automotive and chemical producers involved in the EV battery supply chain. All projects are innovative in terms of investors’ know-how. As technologies are vibrantly developing, flexibility is required to implement them in the best possible way. Bilfinger Tebodin’s multidisciplinary teams provide both technology and civil parts of a plant’s design, procurement, and construction management, including project planning and cost control.

Battery component producers are under a huge pressure to start up production, as the market demand is growing. With dedicated cost experts and professional project managers, Bilfinger Tebodin identifies ways to meet or speed up the crucial time frame. ■