

Media Information
15 November 2022

BMW Group secures CO₂-reduced steel for global production network

+++ New supply agreements in US and China +++ Lower CO₂ emissions for over one third of global steel purchasing volume
+++ Focus on innovative technologies, renewable energies and circular economy +++

Munich. The BMW Group is systematically pursuing its climate goals for the supplier network and significantly reducing the carbon footprint of its steel sourcing. Following initial contracts with European suppliers, the BMW Group has now concluded further agreements for the supply of CO₂-reduced steel in the US and China.

"Steel is one of the main sources of CO₂ emissions in our supply chain. That is why we are comprehensively reorganising our steel portfolio – so we can supply our global production network with over one third of CO₂-reduced steel from 2026. This will reduce the carbon footprint of our supply chain by 900,000 tonnes per year, while at the same time driving the transformation of the steel industry," said Joachim Post, member of the Board of Management of BMW AG responsible for Purchasing and Supplier Network.

In the medium term, the BMW Group will increase CO₂ savings through agreements with additional steel suppliers and thus consistently drive forward the decarbonization of its supplier network. Around 20 percent of supply chain CO₂ emissions for a mid-sized fully-electric vehicle are attributable to steel – which comes in third, after battery cells and aluminium. With its versatile properties, steel is nevertheless one of the key materials for automotive manufacturing and will be no less important for future vehicle concepts and generations.

Focus on renewable energies in the US and Mexico

For the Americas region, agreements have already been reached with domestic steel producers Steel Dynamics (SDI) and Big River Steel, a U. S. Steel facility, to use renewable energy sources in their local steel production.

In the US and Mexico, about half of the BMW Group's flat steel requirements are supplied by the electric arc furnace (EAF) steelmaking process, which relies on electrical energy to melt down iron and steel scrap. This manufacturing process has significant potential for CO₂ savings, compared to coal-based steel production in a blast furnace. The CO₂-reduced steel is then used at BMW Group Plants Spartanburg and San Luis Potosí to create car bodies for BMW vehicles. Due to its material properties, steel from electric arc furnaces is particularly suitable for use in structural components such as the underbody.

Use of innovative technologies in China

In China, the BMW Group already signed an agreement in August with steel manufacturer HBIS Group, which will supply the BMW Group plants in Shenyang with CO₂-reduced steel from 2023. The HBIS Group is gradually transitioning to a hydrogen-based method in combination with electric arc furnace steelmaking to enable further CO₂ savings from 2026. The BMW Group will be the first automotive manufacturer in China to use CO₂-reduced steel from the HBIS Group in series production.

CO₂-reduced steel in Europe

The BMW Group has signed an agreement with Salzgitter AG for delivery of lower-CO₂ steel. The plan is to use the steel in series production of cars at the BMW Group's European plants from 2026 onwards. The BMW Group already signed an agreement with Swedish startup H2 Green Steel in October of last year. The company will supply the BMW Group's European plants with steel produced exclusively using hydrogen and electricity from renewable energies.

Closed loops save resources

The BMW Group has also set up closed-loop material cycles for sheet steel waste with several steel suppliers. When they deliver steel coils to the plants, the manufacturers take steel remnants, such as those produced at press plants when doors are punched out, away with them and use this material to produce new steel. This steel is then sent back to the BMW Group plants. In this way, raw materials can be used multiple times in a circular economy, thereby conserving natural resources.

Investment in startups accelerates development of new technologies

In addition to sourcing CO₂-reduced steel, the BMW Group has also invested in an innovative method for CO₂-free steel production developed by American startup Boston Metal, through its venture capital fund, BMW i Ventures. Boston Metal uses electricity for its new technology, which, by means of an electrolysis cell, produces molten iron that is later processed into steel. If electricity from renewable energies is used for this process, then steel production is almost CO₂-free. Over the coming years, Boston Metal plans to expand the new method for steel production on an industrial scale.

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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 around the world; the company has a global sales network in more than 140 countries.

In 2021, the BMW Group sold over 2.5 million passenger vehicles and more than 194,000 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 its course for the future early on and is making sustainability and resource efficiency the focus of the company's strategic direction – from the supply chain, through production, to the end of the use phase, for all its products.

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