

Media Information
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BMW Group invests in innovative method for CO₂-free steel production

- New method from Boston Metal to be industrialised in mid-decade
- BMW Group continuously reducing CO₂ emissions in its steel supplier network
- Focus on secondary material and closed-loop material cycles at BMW Group press plants
- Wendt: “Around two million tonnes less CO₂ across our steel supplier network by 2030”

Munich. The BMW Group is systematically implementing its sustainability goals. As announced today, the company is investing in an innovative method for CO₂-free steel production developed by American startup Boston Metal, through its venture capital fund, BMW i Ventures. Over the coming years, Boston Metal plans to expand the new method for steel production on an industrial scale. The investment is part of the BMW Group’s far-reaching sustainability activities aimed at significantly reducing CO₂ emissions across the supplier network.

“We systematically identify the raw materials and components in our supplier network with the highest CO₂ emissions from production. Steel is one of them, but it is vital to car production. For this reason, we have set ourselves the goal of continuously reducing CO₂ emissions in the steel supply chain. By 2030, CO₂ emissions should be about two million tonnes lower than today’s figure,” said Dr Andreas Wendt, member of the Board of Management of BMW AG responsible for Purchasing and Supplier Network.

With its versatile properties, steel is one of the most important materials in car production and will be no less important for future vehicle generations. Even with the dynamic ramp-up of electromobility, steel will remain an important building material for car bodies and many components. BMW Group press plants in Europe process more than half a million tonnes of steel per year.

Using electrons instead of coal for steel production

The blast furnaces used in conventional steel production generate carbon dioxide. The startup Boston Metal uses electricity for its new technology, which, by means of an electrolysis cell, produces pig iron that is later processed into steel. If electricity from renewable energies is used for this process, then steel production is carbon-free. The young company will build demonstration facilities for this process over the next few years and further develop it for use on an industrial scale.

The BMW Group established close contact with Boston Metal already last year in the context of its own research activities and through the BMW Startup Garage. The company is now investing in the startup as part of its i Ventures activities. Tadeu Carneiro, Chairman and CEO of Boston Metal: “Our investors span across the steel value chain, from the upstream mining and iron ore companies to the downstream end customer, and validate Boston Metal’s innovative process to produce high-quality steel, cost-competitively, and at scale.”

Innovative technologies and use of green power in steel production

Investing in new technologies is one of many steps the BMW Group is taking to meet its ambitious targets for the steel supply chain. For example, low-carbon production is an important award criterion for every contract.

“It is important to us that our partners are firmly committed to sustainable action and use production technologies with low -carbon emissions,” added Wendt. “The use of green power also has a major impact. We are already working with suppliers who use only green power for the steel they produce for us.”

Closed-loop material cycle and increased use of recycled steel

To safeguard reserves of raw materials, the BMW Group has set itself the goal of further increasing its percentage of recycled raw materials, so-called secondary material, by 2030 and using raw materials multiple times in a circular economy.

All steel waste produced at the press plants – for example, when doors are punched out – is either reused through a direct material cycle or sent back to the steel producer via steel traders and processed into new steel. The use of secondary material reduces CO₂ emissions substantially compared to primary material, conserves natural resources and also reduces the amount of energy needed for production.

Commitment to environmental and social standards in the value chain

As part of its involvement with ResponsibleSteel, the BMW Group actively participated in development of a sustainability standard that covers environmental and social standards throughout the entire value chain, starting at the mine. The sustainability standard for production sites in the steel industry was published in 2019 as part of a multi-stakeholder process and now forms the basis for certification.

Not-for-profit ResponsibleSteel is the steel industry's first global multi-stakeholder standard and certification initiative.

About Boston Metal

Boston Metal is a global metals technology solutions company that is commercializing molten oxide electrolysis (MOE), a patented tonnage metals production platform. MOE provides the metals industry with a more efficient, lower cost, and greener solution for the production of a wide variety of metals and alloys from a wide variety of feedstocks. Boston Metal works closely with customers to tailor the MOE technology for specific alloys, feedstocks, and business needs. To learn more about Boston Metal, visit – www.bostonmetal.com

About BMW i Ventures

BMW i Ventures, BMW's EUR venture capital fund, invests money and resources in startups in the fields of autonomous driving, digital car and automotive cloud, e-mobility, artificial Intelligence and data, industry 4.0, shared and on-demand mobility, customer digital life, and sustainability. The firm has already partnered with innovative companies such as Alitheon, Chargepoint, Recogni, CelLink, Urgent.ly, PureCycle Technologies, Tekion and many more.

BMW i Ventures invests in all stages from seed and incubation to growth companies.

About BMW Startup Garage

BMW Startup Garage is the BMW Group's venture client unit. It shares ideas with more than 1,000 startups in about 30 countries every year, seeking out innovations that deliver real benefits for the BMW Group's products, services, systems and processes. This secures the company early access to innovations that can be customised before they are ready to market. The startups gain valuable insights into automotive processes and are able to build a network within the company. They also receive assistance in refining their business plan. The aim of the programme is to evaluate startups and enable them as long-term partners for the BMW Group, as a way of strengthening the company's innovation leadership. The Startup Garage has a presence worldwide at all BMW Tech Office locations: Munich, Mountain View, Shanghai, Seoul, Tokyo and, since 2020, Tel Aviv.

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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 31 production and assembly facilities in 15 countries; the company has a global sales network in more than 140 countries.

In 2020, the BMW Group sold over 2.3 million passenger vehicles and more than 169,000 motorcycles worldwide. The profit before tax in the financial year 2020 was € 5.222 billion on revenues amounting to € 98.990 billion. As of 31 December 2020, the BMW Group had a workforce of 120,726 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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