



AMG

ADVANCED METALLURGICAL GROUP

ENABLING THE CIRCULAR AND SUSTAINABLE ECONOMY

As a leading Lithium producer, AMG enables green mobility. Safety, efficiency and innovation are driving the business. AMG is an entrepreneur in critical materials, and provides now and for the future what its customers need to move the world.

2022





About AMG

COMPANY OVERVIEW

AMG is a global critical materials company at the forefront of CO₂ reduction trends. AMG produces highly engineered specialty metals and mineral products and provides vacuum furnace systems and services to the transportation, infrastructure, energy and specialty metals & chemicals end markets. AMG was incorporated in the Netherlands in November 2006, formed as a portfolio from a combination of specialty metals businesses. The company is organized into three divisions: AMG Clean Energy Materials, AMG Critical Minerals and AMG Critical Materials Technologies.

AMG Clean Energy Materials combines the recycling and mining operations, producing materials for infrastructure and energy storage solutions while reducing the CO₂ footprint of both suppliers and customers. Clean Energy Materials spans the vanadium, lithium, and tantalum value chains, and in lithium AMG will move further downstream into lithium hydroxide production. AMG Critical Minerals consists of our mineral processing operations in antimony, graphite and silicon metal. AMG Critical Materials Technologies combines our leading vacuum furnace technology line with high-purity materials, serving global leaders in the aerospace sector.

With approximately 3,300 employees, AMG operates globally with production facilities in Germany, the United Kingdom, France, the United States, China, Mexico, Brazil, India, Sri Lanka, and Mozambique, and has sales and customer service offices in Japan.

AMG MARKET FOCUS



Transportation

Innovation is driving demand for critical materials in the transportation industry. Highly engineered metallurgical solutions are needed to increase operating efficiency, lower aircraft weight and improve economics.



Energy

Global energy demand growth is driven by two opposing factors— increased energy usage and improvements in energy efficiency. AMG provides metallurgical technologies to improve energy efficiency and increase energy supply, such as silicon metal used for the production of polysilicon by the solar energy industry, and graphite used as an insulation material.



Infrastructure

Improvements in infrastructure are essential to growing global GDP and reducing carbon emissions. AMG provides critical materials such as ferrovanadium for high-strength steels. These technologies are deployed in infrastructure projects that are critical to addressing global urbanization trends.



Specialty Metals & Chemicals

Specialty metals and chemicals are used to create products that improve global living standards. AMG produces customized metallurgical solutions that meet the market's exacting demands, including tantalum, a material used as a capacitor in electronics, and vanadium-based chemicals which improve the insulating and infrared absorbent properties of structural glass and chemical compounds.

INTELLIGENCE IN LITHIUM

The market for lithium is growing rapidly, driven by a rising need for renewable energy (grid storage) and strong demand for green mobility. AMG will be the first European battery-grade lithium hydroxide producer serving the growing EU cathode material market. By 2028 AMG will become the number one supplier for the battery market in Europe with the highest quality and next generation high-performance battery materials.

The lithium growth strategy of AMG is centred on the company becoming vertically integrated across the entire lithium value chain. The company is entirely backward-integrated and has full control of all conversion steps starting from hard rock mining to manufacturing of battery-grade lithium hydroxide monohydrate.

AMG currently operates its lithium concentrate (spodumene) processing plant in Brazil. Since 2018 the plant processes and produces spodumene from existing tailings at AMG's current mining operations at Mibra in Brazil. The company has an annual spodumene production capacity of 90 ktpa at present and is currently undertaking a project, to expand this annual capacity by 44% to 130 ktpa. The current 90 ktpa is sold through long-term offtake agreements (through 2028). The significance of 2028 is that it marks the point in AMG's growth plan at which spodumene will instead be shipped internally to ultimately produce lithium hydroxide. This intermediate step downstream encompasses a technical-grade lithium precursor plant, effectively creating the intermediate product that can later be upgraded to battery-grade lithium carbonate or hydroxide. Bringing this intermediate process in-house is an important step in AMG's plan to create a full lithium value chain.

The precursor plant, to be located in Brazil, will save on operating expenses but will also mean that AMG can avoid having to ship spodumene out of Brazil for external conversion before subsequently being shipped again to AMG's planned upgrading facility in Germany to become a battery-grade product.

The next stage of extracting further value from the lithium supply chain comes from AMG's planned production of battery-grade lithium hydroxide in Germany. The planned plant is located in Bitterfeld, in eastern Germany. The plant is of a modular design, with a maximum capacity of 100 ktpa, which would be shared across five 20 ktpa modules, which can be added individually over time. The first module is currently under construction and is expected to commence production in Q3 2023. Under AMG's published plan, Modules 2 and 3 would come online through 2025-2026, followed by Modules 4 and 5 in 2027-2028.



Dr. Heinz Schimmelbusch
Chairman & CEO AMG Group

"We at AMG combine extensive Lithium expertise in Research & Development, Production, and Marketing with a reliable and secure raw material base. We strive to become the number one supplier for the battery market in Europe. Besides quality and reliability, we focus on sustainable products and processes to minimize the carbon footprint for our customers and ourselves."



MANAGEMENT BOARD



Dr. Heinz Schimmelbusch

Chairman & CEO

Dr. Schimmelbusch was appointed Chief Executive Officer and Chairman of the Management Board on November 21, 2006, and he was reappointed for a term of two years starting May 2021. He has served in a similar capacity for businesses comprising AMG since 1998. Dr. Schimmelbusch served as Chairman of the Management Board of Metallgesellschaft AG from 1989 to 1993. His directorships have included Allianz Versicherung AG, Mobil Oil AG, Teck Corporation, Methanex Corporation, Metall Mining Corporation and MMC Norilsk Nickel. Dr. Schimmelbusch served as a member of the Presidency of the Federation of German Industries (BDI) and the Presidency of the International Chamber of Commerce (ICC). Dr. Schimmelbusch received his graduate degree (with distinction) and his doctorate (magna cum laude) from the University of Tübingen, Germany.



Eric Jackson

Chief Operating Officer

Mr. Jackson was appointed a member of the AMG Management Board on April 1, 2007. He was appointed to the newly created position of Chief Operating Officer on November 9, 2011, and reappointed to the AMG Management Board for a term of four years on May 2021. Mr. Jackson has served in various senior management positions for businesses now owned by AMG since 1996, most recently as President and Chief Operating Officer of Metallurg, Inc. Mr. Jackson previously held senior management positions at Phibro, a division of Salomon Inc., Louis Dreyfus Corporation and Cargill Incorporated in Canada and the United States. Mr. Jackson received a Bachelor of Science degree in Economics and an MBA, both from the University of Saskatchewan.



Jackson Dunckel

Chief Financial Officer

Mr. Dunckel was appointed Chief Financial Officer of AMG on February 1, 2016. He was appointed a member of the AMG Management Board on May 4, 2016 and reappointed for a term of four years on May 2020. Mr. Dunckel joined AMG from the Macquarie Group Limited where he served as Managing Director and US Head of Chemicals from 2010 to 2015. Prior to this, Mr. Dunckel held various senior level positions at JP Morgan Chase since 1995, including Executive Director, Investment Banking Coverage. Mr. Dunckel graduated, cum laude, with a bachelor's degree in European History from the University of California, Berkeley, and completed his MBA in International Finance at the Leonard Stern School of Business in 1995.

Our Finance OVERVIEW

Further information about all financial market relevant highlights as well as press releases and reports can be found for download on our [homepage](#).

