

Critical materials for a sustainable planet

ESG MAGAZINE 2024

AMG Critical Materials N.V.



AMG's 2030 commitment – *already achieved in 2024*

AMG considers the subject of Environmental, Social, and Governance (“ESG”) a core organizational value and is not limited by simply being compliant with regulations and best practices, but by demonstrating its commitment to ESG values every day in what we do and how we do it.

Maintaining our commitment to sustainability

In previous years, we reported that we would commit to achieving a reduction of direct CO₂ emissions by 2030 from a baseline of 2019, adjusted for the startup of the Zanesville facility, by 20%. This target has been achieved at the end of 2024. As a result, and as we further progress on sustainability reporting based on the European Sustainability Reporting Standards (ESRS), we will consider communicating revised emission reduction targets in future annual reports.

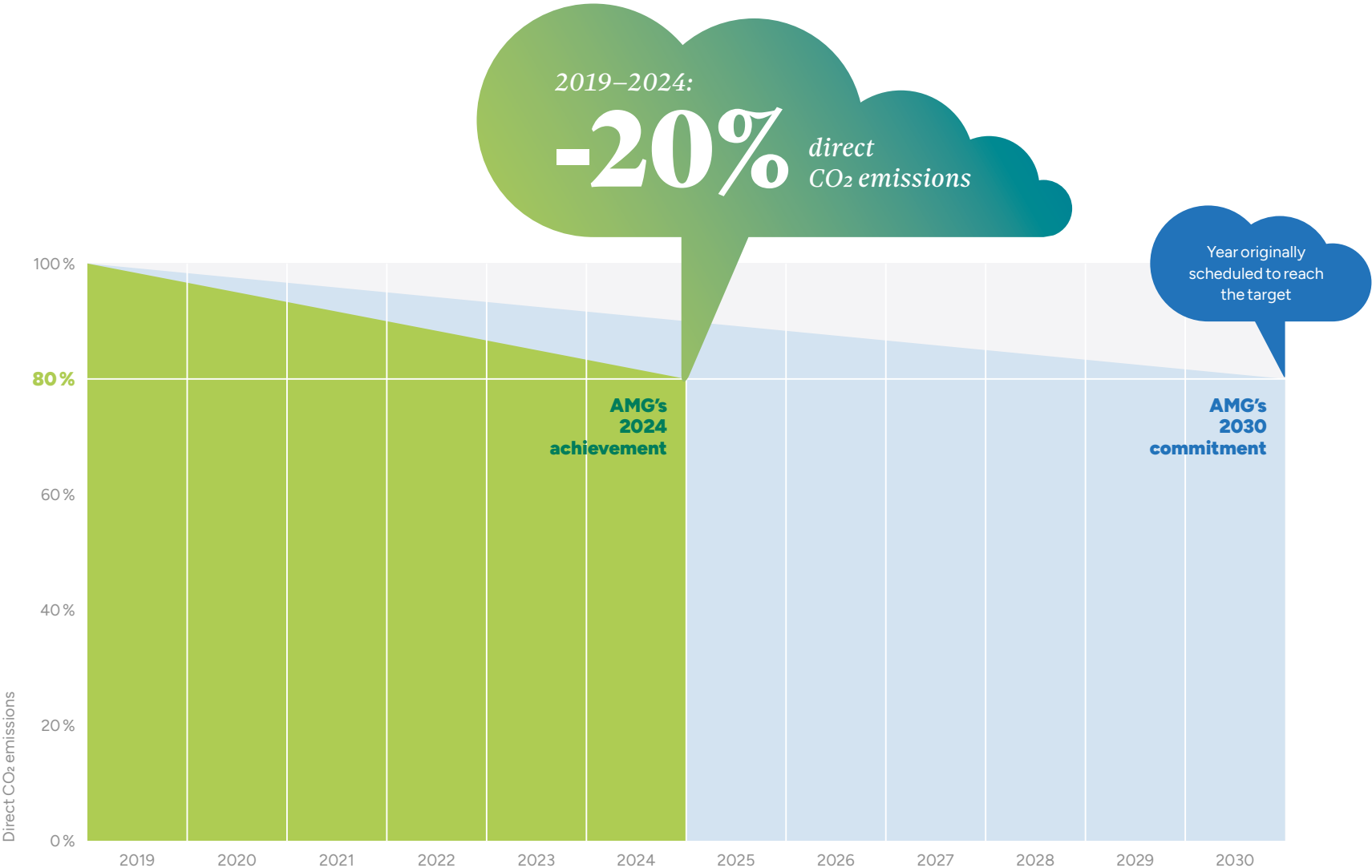


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“AMG’s biggest stakeholder is our planet”



Welcome to AMG’s first sustainability magazine. In this interview, CEO Dr. Heinz Schimmelbusch talks about the mission of the AMG Group and explains why innovative strength is vital for sustainability.

Dr. Schimmelbusch, what does AMG stand for?

The rule for AMG is to figure out how to be the sustainable low-cost producer of materials like lithium and vanadium. Our mission is to support the global energy transition by providing high-purity lithium products essential for the battery industry as well as expanding our global leadership in circular vanadium production. Vanadium and vanadium electrolyte are crucial for steel production and for the supply of vanadium batteries. However, the most important thing at AMG is our employees and their expertise in critical materials: At AMG Engineering/ALD, we have an outstanding engineering ratio of more than 60 percent. This is unique and secures our market leadership in technologies such as vacuum furnaces.

How important is innovation for sustainability?

Innovation is clearly the engine for sustainability. AMG’s business focuses on materials for the future and the associated technologies. Early on, in 2018, we formed ECO₂RP, the Enabling CO₂ Reduction Portfolio, to consolidate innovative product lines across AMG which enable CO₂ reduction. We performed a stringent Life Cycle Assessment for each of our product lines and calculated the CO₂ reduction we enabled through our customers’ use of these products. In 2024, we recorded an astonishing 114 million tons of CO₂ savings – a much higher CO₂ reduction than what can be directly achieved by AMG.

Can you name examples?

ALD’s special coating for aircraft blades saved 76 million tons of CO₂ emissions in 2024. We are the world leader in building thermal barrier coatings around the world operated by our customers such as Pratt & Whitney, GE, Linde, Rolls Royce, and Safran. With our Lithium segment we are building the “Brazil-Portugal-Germany lithium highway” to secure the supply of the critical raw material lithium in the heart of Europe and to pave the way to climate-neutral mobility. In module one of our refinery in Bitterfeld, Germany, we will produce 20,000 tons of lithium annually, enough for the batteries of 500,000 electric cars. And last, but not least, the recycling of vanadium-containing refinery waste in spent catalysts by AMG Vanadium reduces CO₂ emissions by up to 80 percent compared to conventional mining methods. Just to name three examples.

What is the driving force behind AMG’s mission?

Our highly motivated international team and our values. Strongly committed to environmental sustainability, our values embrace care for the planet, working safely, creating value for our stakeholders, respecting people and acting with integrity. I am proud of our values and the work of the entire team every day to uphold these. After all, AMG’s biggest stakeholder is our planet.

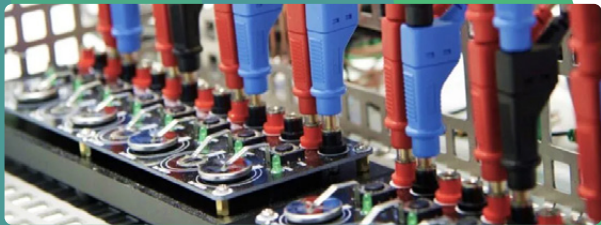
→ [More about Dr. Schimmelbusch](#)

→ [Read the latest AMG Annual Report](#)



Objective
Workplace safety

Provide safe working conditions for our employees and be responsible stewards of the environment.



Objective
Compliance

Meet or exceed regulatory standards by engaging in ethical business practices.

Our sustainable approach

AMG strives to make positive and tangible efforts in support of its sustainable development objectives. They have been formulated by the Company in line with its financial objectives, technological capabilities, and our leading position in the global metallurgical industry.



Objective
Community management

Be a valued member of the local economy, community, and society by contributing to solutions to address some of the fundamental environmental and social challenges facing society today.



Objective
CO₂ reduction

Target industrial activities which either contribute to the reduction of greenhouse gas levels through the circular economy or by arriving at technologies which enable our business partners to reduce greenhouse gas levels and quantify the success of these endeavors.

Critical materials for a sustainable planet

We provide critical materials and related process technologies to advance a less carbon-intensive world. To this end, AMG is focused on the production and development of energy storage materials such as lithium, vanadium, and tantalum. In addition, AMG's products include highly engineered systems to reduce CO₂ in aerospace engines, as well as critical materials addressing CO₂ reduction in a variety of other end use markets.

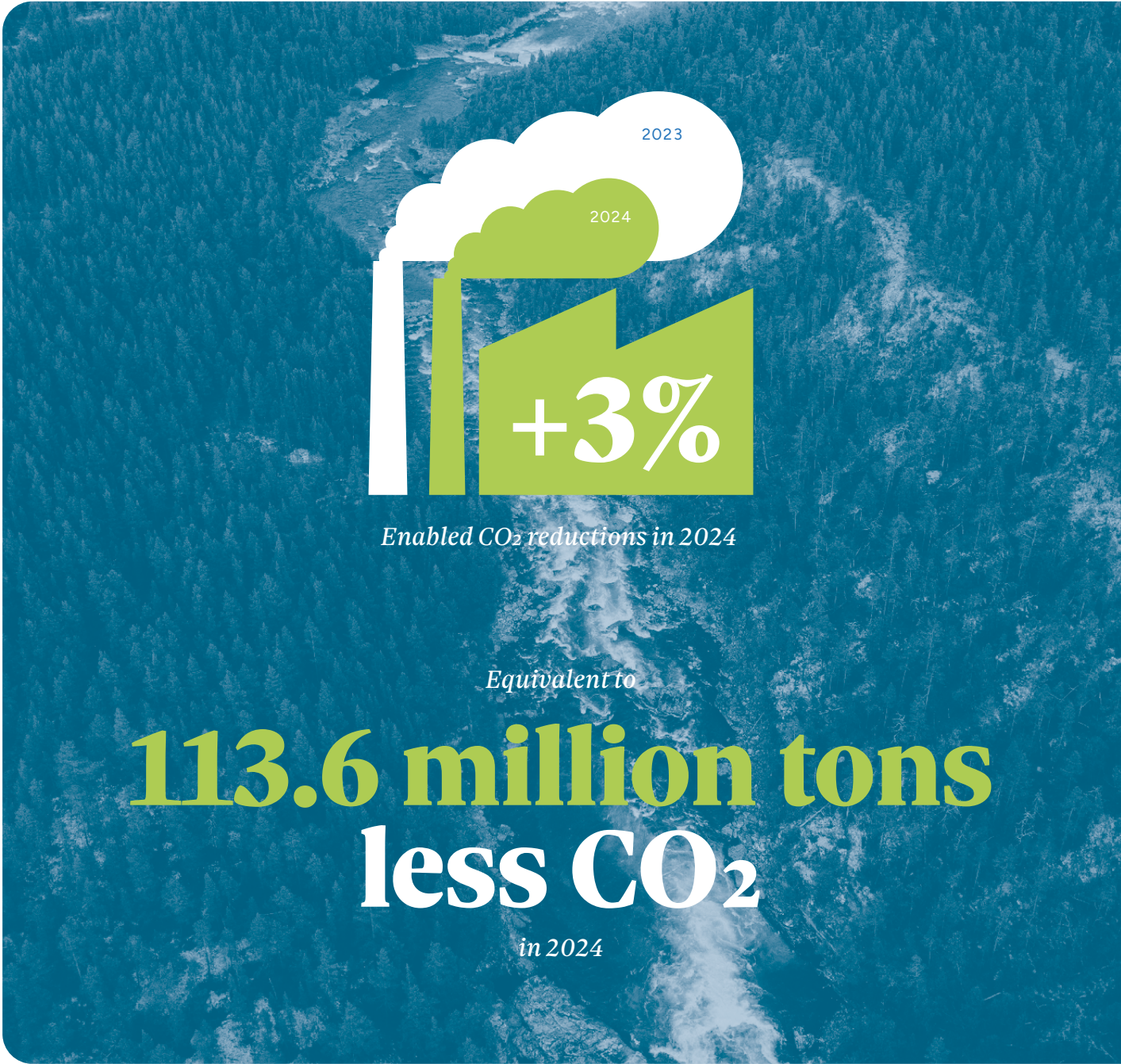
AMG was founded on the principle that CO₂ abatement targets would create increased criticality for specialty materials. This strategic focus is encapsulated in the Enabled CO₂ Reduction Portfolio concept (ECO₂RP) at the level of AMG's customers. Our strategic focus is fully aligned with – and in support of – the EU Taxonomy initiative on sustainability and its climate objectives.

→ [More about AMG.](#)

”We strive to become the number one supplier of battery-grade lithium hydroxide in Europe. Besides quality and reliability, we focus on sustainable products and processes to minimize the carbon footprint for our customers and ourselves.“



Dr. Heinz Schimmelbusch,
CEO AMG Critical Materials N.V.





Dr. Stefan Scherer, CEO AMG Lithium
 Dr. Reiner Haseloff, Prime Minister of Saxony-Anhalt, Germany
 Dr. Heinz Schimmelbusch, CEO AMG Critical Materials N.V.
 (from left)

Intelligence in lithium

Lithium is among the most vital of the critical materials globally in terms of fighting climate change: the market for lithium is growing rapidly, driven by a strong demand for electric vehicles, robust growth in smartphones, tablets, and wearables and the rising need for renewable energy (grid storage).

From mining through to next generation lithium products

From mining to the next generation of lithium products, AMG Lithium aims to cover the entire lithium value chain by 2026: from spodumene extraction at its own mine in Brazil, to the production of technical-grade lithium carbonate in Brazil, to the production of battery-grade lithium hydroxide in Germany. With the refinery, AMG is making a decisive contribution to securing the

supply of the critical raw material lithium for the industry in Europe. The establishment of our own complete lithium value chain also contributes to the European Critical Raw Materials Act and offers greater independence for raw materials and critical materials.

First mover in Europe

On September 18, 2024, AMG celebrated a huge milestone: the opening of its lithium refinery in Bitterfeld, Germany. Around 250 guests, including the Prime Minister of Saxony-Anhalt, the Minister of State and Federal Government Commissioner for Eastern Germany, the Vice Governor of Minas Gerais, Brazil, as well as many AMG employees and numerous journalists, came to see Europe's first lithium refinery.

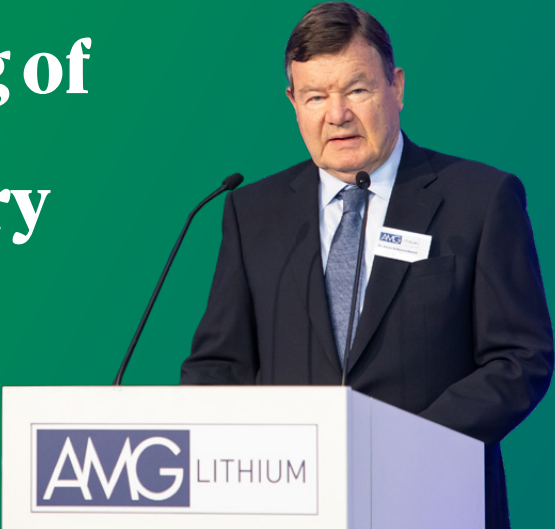
” We will be ready to supply the European electric vehicle market as it transitions to full electromobility by 2035. In addition to providing lithium, this includes above all our technological know-how to produce the basic material for industrial production in the best and most reliable quality. “

Dr. Stefan Scherer,
 CEO AMG Lithium



Grand opening of Europe's first lithium refinery

September 18, 2024



Recycling instead of mining

80% less CO₂ emissions

AMG's vanadium recycling strategy reduces CO₂ emissions by up to 85% compared to conventional mining methods.

AMG Vanadium, Zanesville, Ohio, USA

Vanadium world leader based on circular economy

AMG is the world's largest recycler of vanadium-containing refinery waste in spent catalysts. Vanadium is an important critical material, needed for the steel industry, the chemical industry, and the rapidly growing industrial energy storage market.

Highlights of AMG's vanadium segment

- In Ohio, USA, AMG produces ferrovanadium, an alloy for steel applications including rebar, bridges, automobiles, aerospace, and national defense 100 percent primarily from spent catalysts.
- In Zanesville, Ohio, the new vanadium spent catalyst recycling facility started operations in 2022. The facility doubles AMG's production of ferrovanadium to 60,000 tons annually.
- In the vanadium electrolyte (VEL) plant at AMG Titanium in Nuremberg, Germany, AMG produces vanadium electrolyte to serve the battery and energy storage market for the energy transition.

- 6,000 m³ of VEL, which is the annual production capacity in Nuremberg, provides an energy storage capacity of around 100,000 kWh.

The Shell AMG Recycling joint venture will construct and operate a "Metals Reclamation Complex" in Jubail, Saudi Arabia, to support the energy transition ambitions of the "Saudi Vision 2030".

→ [Read more here.](#)

Did you know?

The addition of just one pound of vanadium to a ton of steel leads to a 20 to 40 percent increase in strength. This means that in large-scale construction projects, such as building bridges, less steel is required to achieve the same structural integrity, resulting in a more efficient use of resources. The global impact is significant: less steel production means fewer emissions, helping to reduce the environmental footprint of construction projects worldwide.

→ [Further information about AMG Vanadium](#)

→ [Further information about AMG Titanium](#)

Engineering for CO₂ reduction

It's all about efficiency. Whenever major engine manufacturers want to reduce the fuel consumption of their aircraft turbines, the phone rings at ALD Vacuum Technologies in Hanau. This is because the company is a world leader in making turbine blades more heat-resistant. With its vacuum technology systems, which are the size of a detached house, ALD eliminates oxygen and thus achieves better material properties. The turbine blades coated with zirconium oxide in a vacuum enable a combustion process that is 150 degrees hotter, reducing kerosene consumption by more than 10 percent. And that in turn means fewer CO₂ emissions from aircraft.

Premise of carbon dioxide reduction

For more than 20 years, everything the team at ALD has worked on has been based on the premise of reducing carbon dioxide, a goal that is more than paying off in the industry. Increasingly strict climate and environmental protection laws not only apply to the aviation industry, but lightweight and long-lasting parts are also in demand from car manufacturers and the solar industry.

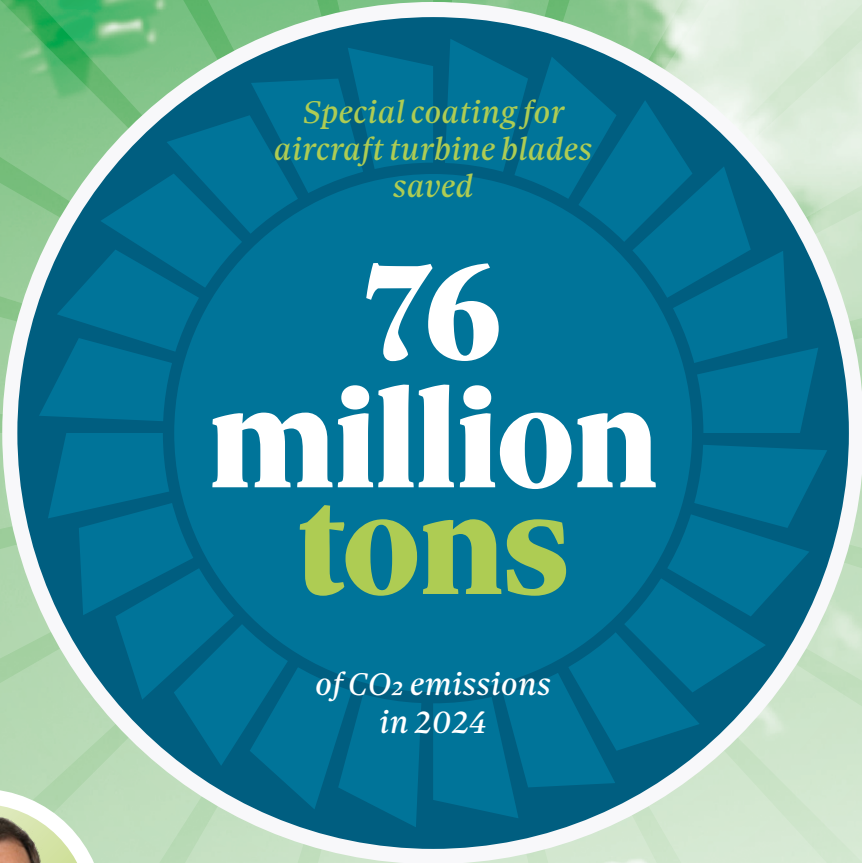
ALD Vacuum Technologies has its roots in the renowned German companies Heraeus, Leybold, and Degussa. Today, ALD with an engineering ratio of more than 60 percent, is the world's leading manufacturer of vacuum equipment for vacuum metallurgy and heat treatment. It supplies equipment and systems for thermal and thermochemical treatment of metallic materials in solid and liquid form. From vacuum remelting on turbine blade coating to silicon refining and crystallization for solar grade silicon: AMG's technologies and know-how enable cost reduction and a lower carbon footprint in high growth industries, such as automotive, aerospace, energy, specialty metals/chemicals and solar energy.

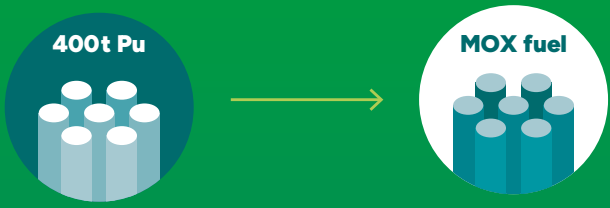
→ [More about ALD Vacuum Technologies.](#)

“ALD is noted for its superb know-how, high investments in research and development and its strategic alliances.”

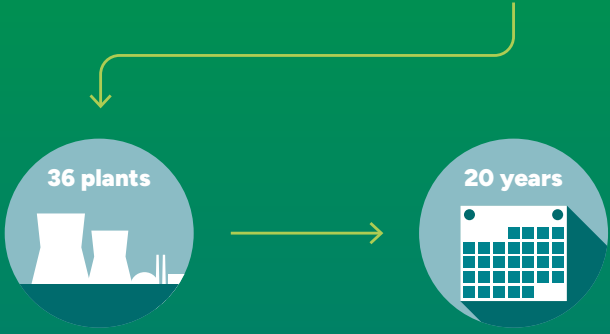


Michael Hohmann,
CEO ALD Vacuum Technologies





400 tons of civil-use Plutonium stored worldwide... turned into new MOX fuel...



could power 36 one-gigawatt nuclear power plants... for 20 years and...

save
2 billion tons
of **CO₂ emissions**

if measured against a coal dominated grid.*

A new era for nuclear energy

Nuclear energy is making a comeback. According to a study by the International Energy Agency, global interest in nuclear energy is greater than it has been since the oil crisis in the 1970s. To service the nuclear fuel market, AMG announced the formation of NewMOX SAS.

The world needs energy. This is due not only to the increased demand from traditional sectors such as industry, but also to the increased demand in areas such as electric cars, data centers and the use of Artificial Intelligence. In 2024, the world’s fleet of nearly 420 nuclear power reactors contributed just under ten percent of the world’s electricity supply and was the second largest source of low-emission energy after hydropower. More than 70 gigawatts of new nuclear capacity are under construction worldwide, and more than 40 countries around the world have plans to expand the role of nuclear energy in their energy systems.

MOX: Saving over 2 billion tons of CO₂ emissions

To service the nuclear fuel market, AMG announced the formation of NewMOX SAS, Grenoble, France, in April 2024. NewMOX is a subsidiary of ALD Vacuum Technologies, our engineering subsidiary focused on vacuum furnace technology, which

includes sintering furnace systems enabling the production of commercial nuclear fuel from plutonium and depleted uranium (termed “MOX”).

The total global storage of civil-use plutonium resulting from the reprocessing of spent fuel from commercial nuclear power operations stands at 400 tons. If turned into electricity, this plutonium could power 36 one-gigawatt nuclear power plants for 20 years*. Recycling this plutonium would result in “CO₂ free” power and a saving of over 2 billion tons of CO₂ if measured against a coal dominated grid.

* Assumption: Standard Reactor operation with 30% MOX fuel and 70% Uranium dioxide fuel.

Advantages of NewMOX technology

- Nuclear Heritage: recycling of nuclear waste reduces costs and eases the search for a final disposal
 - Reducing CO₂ emissions: Increasing demand for clean energy
 - MOX fuel: Supporting nuclear fuel supply chain security by supply diversification
- [To the International Energy Agency study](#)

From waste to renewable energy

In its “Vision 2030”, Saudi Arabia has set itself a clear goal: by 2030, the kingdom wants to obtain 50 percent of its energy from renewable sources. This would reduce CO₂ emissions by more than 130 million tons. The oil state is switching to wind turbines and the world’s largest solar power plant. But what happens when the wind doesn’t blow, and the sun doesn’t shine?

The partnership of oil and vanadium creates a greener future

This is precisely where we at AMG come in. The Shell & AMG Recycling joint venture processes waste such as ash and spent catalyst from Saudi Arabia’s conventional refineries and power plants and recycles the vanadium they contain. AMG uses this valuable material to produce redox flow batteries, long-lasting industrial-scale batteries that store excess power for later use – in situations the wind doesn’t blow, and the sun doesn’t shine.

Enabling the energy transition

As the world’s largest recycler of vanadium-containing refinery waste we are proud to be a reliable partner in the joint venture with Saudi Aramco to construct and operate a world-class Metals Supercenter Complex in Al-Jubail Industrial City, Saudi Arabia. There, we will build our AMG LIVA Hybrid Energy Storage System, which combines the best of both worlds: lithium-ion batteries for high-performance power and vanadium redox batteries for long-duration energy storage. The circular economy enables increased penetration of renewable energy into the Kingdom’s energy supply mix and improving energy efficiency for industrial users – an important factor in the energy transition.

→ [Click here for the film of Shell AMG Recycling.](#)

AMG’s law: “Everything that **can be recycled** **will be recycled.**”



The Metals Supercenter Complex in Al-Jubail Industrial City, Saudi Arabia

Project 1: Gasification ash, technology provider: AMG
Project 2: Spent catalyst, technology provider: AMG
Project 3: Fresh catalyst manufacturing, technology partner: Shell Catalysts & Technologies
Project 4: Mass energy storage, technology provider: AMG LIVA

Where the lithium highway starts

The world needs lithium – for e-mobility and the energy transition. AMG operates its own mine, the Mibra Mine, in the state of Minas Gerais. Here, in the northwest of Rio de Janeiro, AMG Brasil produces and sells lithium concentrates, aluminum alloys, tantalum and niobium oxides of certified origin on the global market.

With the mining infrastructure already in place in Minas Gerais and the recovery of lithium-bearing material from existing and future tailings, AMG aims to be the world’s low-cost producer of lithium concentrate. AMG’s lithium value chain is fully backward integrated: AMG has full control over all conversion steps. From ore mining, carried out by AMG Brasil, to the refining of battery-grade lithium hydroxide in Bitterfeld, Germany, operated by AMG Lithium.

80 percent of the lithium processed in Bitterfeld comes from the Company’s own mine. Today, an intermediate step is still required in China to refine the lithium into battery-grade lithium hydroxide. AMG’s planned new lithium converter directly at its own mine in Brazil will soon make this intermediate step unnecessary.

It will help reduce additional CO₂ emissions as the concentrate will be processed in Brazil – eliminating the need to ship it to China and from there to Europe. The lithium highway will run directly from Brazil to Europe.

AMG Brasil is a member of the Responsible Minerals Initiative and is committed to achieving the highest standards of safety, environmental conduct and producing materials that help its customers to minimize negative environmental impact.

→ [Learn more about the Responsible Minerals Initiative.](#)

” Research and innovation are basic premises of AMG Brasil’s work, intertwined with sustainable development. We are aware of our social and environmental responsibility. AMG’s growth strategy in Brasil will contribute significantly to the development of the region where we operate. “



FABIANO COSTA,
CEO AMG BRASIL

AMG's total incident rate performance 2024



AMG delivers another strong safety record
which was
74% better
than industry averages*.

* AMG compares itself to the industry average for Primary Metal Manufacturing (NAICS 331).

Fantastic performance at AMG Aluminum Henderson



**Zero lost time injuries
in 10 years**

We are filled with pride and thanks to the whole team.

20–40% less energy costs

Three components effectively combined

Software solution with artificial intelligence (AI) for analysis and control

Lithium-ion battery as a high-performance storage unit

Vanadium flow battery as a mass energy storage unit

The system enables the economic integration of sector coupling strategies with renewable energies through to the production and utilization of green hydrogen.

Since 2024, LIVA's first commercial Hybrid Energy Storage System is operational at Wipotec, Kaiserslautern, Germany, enhancing the facility's power system. Wipotec is one of the world's leading businesses for dynamic weighing technology and product control.

Enabling the energy transition

Demand for energy, and electricity in particular, is increasing worldwide, and companies must prepare for a profound change in the energy market.

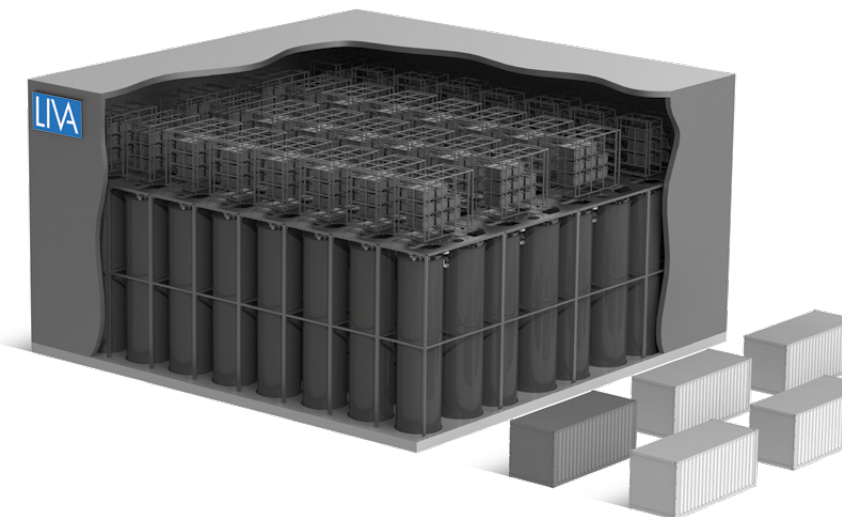
Three factors play a particular role in this: the rising demand for electricity with fluctuating energy costs, the increasing supply of decentralized renewable energies and rising costs for CO₂ emissions. LIVA Power Management Systems, headquartered in Frankfurt, Germany, specializes in the development and creation of complex industrial solutions with Hybrid Energy Storage Systems (Hybrid ESS) for industrial applications.

From Tier-1 automotive supplier with automated assembly lines to energy intensive electro-steel production: LIVA Hybrid ESS stands for active power management without intervention of the production process and helps to reduce energy cost and our clients' carbon footprint.

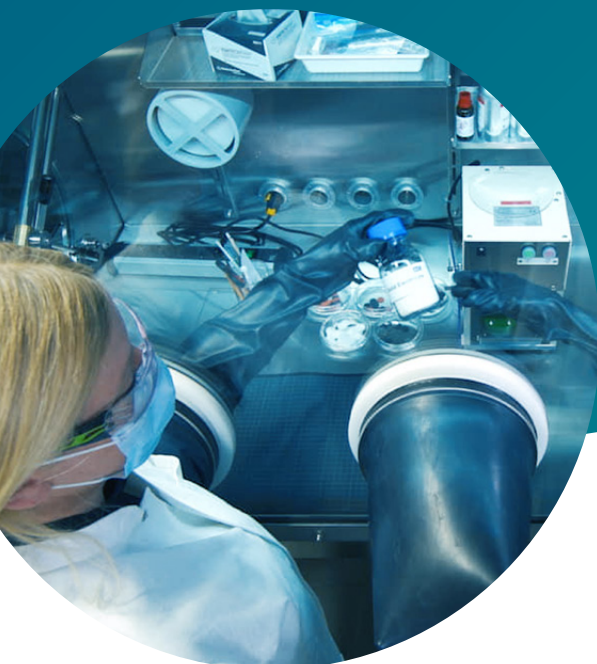
→ [Watch the LIVA Power Management Systems company film.](#)

Modular structure – individual design

Our customers' requirements determine how we design the LIVA Hybrid ESS and implement it on site.



“The next *big* evolutionary step”



As Head of R&D Battery Materials at AMG Lithium, Dr. Vera Nickel researches materials for solid-state batteries. In this interview, she talks about the groundbreaking advantages and industrialization.



What are solid-state batteries?

Solid-state batteries or “all-solid-state batteries” promise to be the next big evolutionary step in battery technology. All-solid means that no liquid components are used in this type of battery, thus preventing leakage. The groundbreaking advantages of solid-state batteries are therefore primarily higher energy densities combined with improved safety and faster charging characteristics. In addition, the robustness of this technology improves the expected service life.

What are the advantages of solid-state batteries and where are they used?

In today's generation of batteries, the solid active materials – anode and cathode – are combined with liquid or gel-like electrolytes. These contain highly flammable solvents and toxic substances that can be released in the event of a defect. In solid-state batteries, solid materials that are neither flammable nor temperature-sensitive are used instead of liquid electrolytes. This enables higher charging currents, a more compact design and improved user safety. Due to these advantages, solid-state batteries are currently used primarily in electromobility, as well as in power tools and data centers.

Why is AMG researching for this new type of battery?

Solid electrolytes are an innovative materials class that is not yet available on the market in commercial quantities and is part of AMG Lithium's growth plan.

We at AMG Lithium are developing this battery component and the raw material lithium sulphide in highly specialized laboratories in Frankfurt. Parallel to material innovation, performance studies are also carried out in our in-house test center to evaluate the performance of our materials in the battery right from the start.

With our motivation and expertise, we will drive forward the market launch and industrialization of this type of battery to make the batteries of the future safer and more powerful!

Our state-of-the-art R&D Laboratory is located in the Industriepark Höchst, Frankfurt/Germany. The main objectives are the technical support and process optimization for our upgrading plant, as well as research activities on next-generation products for energy storage, i. e. solid-state battery materials and Lithium Hydroxide Anhydrous.

The foundation of everything we do

In 2023 we have firmly embedded the protection of our planet, that we see as our greatest stakeholder, in AMG's Value Statement. AMG's values form the basis of how we conduct our operations and how we deal with our colleagues, business partners and stakeholders.

We act safely

“ ‘We act Safely’ being AMG’s first value is no coincidence. AMG’s safety record is a testament to the dedication and hard work of its employees. Taking extra steps to work safely and planning work with safety in mind ensures we send our family members home to their loved ones safely every day.”

JANE NEAL, SENIOR VICE PRESIDENT, AMG VANADIUM



We create value for our stakeholders

“ I’m proud to be part of an AMG team using particular expertise and innovative technology to address some of society’s most challenging issues. In applying high standards, we aim to have positive impact for people, the planet, and profit. It is my daily motivation to find the best solution for all our stakeholders.”

GUIDO LÖBER, CEO, AMG TITANIUM





We respect people

“Working relationships with all employees in all areas of our company are based on respect for the individual. As Head of Human Resources, my department is at the leading edge of upholding these values with colleagues, employees and external stakeholders, ensuring that we create a working environment where all employees are treated with dignity and respect, regardless of their role or position within the company.”

SAMANTHA SCARFE, HEAD OF HR, AMG CHROME LTD.,
AMG ALUMINUM UK LTD.

*We protect our planet
by enabling CO₂ reduction*

“At ALD, we continuously improve our machines and technologies. Our new EIGA Premium and EBuild systems represent significant advancements in powder atomization and powder bed fusion, reducing material waste and enhancing productivity. This evolution is vital for sustainability, greater efficiency, and CO₂ savings for a greener future.”

DR. ALEXANDER KLASSEN, VICE PRESIDENT ADDITIVE
MANUFACTURING, AMG ENGINEERING/ALD



We act with integrity

“I consider compliance with the law and upholding our AMG values as cornerstones of an ethical and honest business environment and as the primary tool to mitigate risk and avert damage to our company’s assets. More broadly, acting with integrity creates a trustworthy foundation that enables prosperity for all stakeholders with whom we interact.”

ANNEROSE TASHIRO, LAWYER, AMG LITHIUM



Success has many faces

ALD Vacuum Technologies has been recognized by the F.A.Z. Institut as the industry leader and is setting the benchmark in diversity and inclusion for 2024 in the machinery and equipment sector.

With approximately 1,000 employees worldwide, ALD exemplifies the strength that comes from

embracing diverse perspectives and experiences. At their headquarters in Hanau, Germany, colleagues from 25 nationalities and numerous professional fields collaborate to drive excellence.



78%

engagement index
(+2% above Mercer’s industry norm)

Willingness to go above and beyond

In December 2024, AMG undertook its Employee Engagement Survey to gather insights into employee satisfaction, engagement, and the overall workplace culture. The results reflect a strong level of engagement among employees.



88%

of employees felt that the company treats its employees fairly



85%

of employees expressed a willingness to go above and beyond for AMG



Women in engineering

In October 2024, the CDIC presented AMG at the world's largest conference for women in engineering and technology careers in Chicago, USA. Jane Neal, Senior Vice President at AMG Vanadium, Becky Arnold, Plant Manager at AMG Vanadium, and Grace Stubel, Director of Communications at AMG Critical

Materials N.V., used the Society of Women Engineers conference to provide information about career opportunities for women at AMG and to network. AMG is dedicated to empowering and advancing women within the organization.

Empowering everyone

AMG's main asset are its people – the knowledge and experience of our employees. For this reason, we are committed to fostering an inclusive workplace culture that values diverse perspectives and drives innovation across all levels of the organization – for all employees worldwide. That's a vital aspect of our corporate ethos.

AMG has underlined its commitment to diversity and inclusion through the establishment of the CDIC (Corporate Diversity and Inclusion Council) in 2023, which consists of 11 members from various departments. The CDIC oversaw the creation of two Employee Resource Groups: "Women In Networking" and "Leadership, Development and Mentorship", which held quarterly meetings in 2024. By providing dedicated spaces for networking and mentorship, we aim to create a more inclusive and collaborative work environment where every employee feels valued and can thrive.

In April 2024, Jessica Brieger, Senior Manager Workforce Reporting, and Britta Sadoun, Director of Social Impact for AMG N.V., used Femworx to present AMG as an international company and to talk to industry experts and young talent. Femworx is the Career Congress for Women in Industry at the Hannover Messe, the world's leading trade fair for the industry. As Chair of CDIC 2025, Jessica Brieger will share her many impressions of the congress.



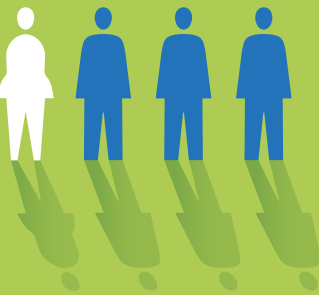
By 2030 AMG aims
to have at least

30% of
management
roles



held
by women

Engagement for diversity and inclusion



AMG'S commitment to increasing the representation of women at top management level has yielded promising results. Over the last years, we have observed a consistent uptrend, culminating in a noteworthy 25 percent representation in 2024.

In June 2024, AMG's CEO Dr. Heinz Schimmelbusch signed the Society for Human Resource Management's (SHRM) CEO Action for Inclusion & Diversity pledge. The initiative aims to rally the business community to advance inclusion and diversity within the workplace by working collectively across organizations and sectors.



We remain resolute in our pursuit of inclusivity, recognizing its value to both our corporate culture and overall success.

AMG Brasil honored with the Human Being Award for the "Female Voices" project



On November 28, 2024, AMG Brasil was honored in the ESG category for the project "Female Voices: The Journey of Women at AMG Brasil Through Listening" at the presentation of the prestigious Human Being Award.

The initiative highlights the company's commitment to promoting gender equality by analyzing diversity data and conducting in-depth discussions with female employees. The Human Being Award is organized by the Brazilian Association of Human Resources and recognizes exemplary HR initiatives.

The positive results of "Female Voices" underscore AMG's commitment to promoting the personal and professional development of all employees. We strive to cultivate a corporate culture based on diversity, equality, inclusion and belonging. The award is a testament to AMG Brasil's great commitment to ESG principles and its motivation to contribute to a fairer and more sustainable society.



The power of principles

Since 2009, AMG Critical Materials has been supporting the Ten Principles of the United Nations Global Compact (“UNGC”) in the areas of Human Rights, Labor, Environment and Anti-Corruption. Our Code of Business Conduct and Policy on Human Rights set out our commitments to act ethically and uphold the ten UNGC principles in all our business activities.



United Nations Global Compact

Human rights

Principle 1

Businesses should support and respect the protection of internationally proclaimed human rights.

Principle 2

Make sure that they are not complicit in human rights abuses.

Labor

Principle 3

Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.

Principle 4

The elimination of all forms of forced and compulsory labour.

Principle 5

The effective abolition of child labor.

Principle 6

The elimination of discrimination in respect of employment and occupation.

Environment

Principle 7

Businesses should support a precautionary approach to environmental challenges.

Principle 8

Undertake invitations to promote greater environmental responsibility.

Principle 9

Encourage the development and diffusion of environmentally friendly technologies.

Anti-Corruption

Principle 10

Businesses should work against corruption in all its forms, including extortion and bribery.

Taking action for sustainability

AMG is a member of the United Nations Global Compact and supports the United Nations Sustainable Development Goals (SDGs). Selected examples from the AMG world show how.



4

QUALITY
EDUCATION

On March 22, 2024, AMG Brasil promoted internal and external initiatives for awareness on World Water Day.



7

AFFORDABLE AND
CLEAN ENERGY

Lithium from tailings for use in the advancement of the energy sector by way of battery-grade lithium hydroxide.



9

INDUSTRY, INNOVATION
AND INFRASTRUCTURE

ALD Vacuum Technologies is a world leader in turbine blade coaters enabling higher operating temperatures, dramatically increasing fuel economy and reducing CO₂.



10

REDUCED
INEQUALITIES

In 2024, AMG Brasil signed the letter of adhesion to Women in Mining (WIM), which aims to adhere to policies and actions targeted at female leadership in the industry and mining.



12

RESPONSIBLE
CONSUMPTION
AND PRODUCTION

AMG Vanadium, Zanesville, Ohio: recycling waste catalyst and minimizing landfilling and environmental impacts.

SUSTAINABLE
DEVELOPMENT
GOALS

The black diamond

Like diamond, graphite is made of pure carbon – and it is built to tackle the toughest tasks. Graphite is a true all-rounder. Whether in electric motors, brake linings and insulating material, in paint or pencil lead: graphite is everywhere.

Since its founding over a hundred years ago, AMG Graphite has been synonymous with outstanding expertise in raw materials, with production sites in Europe and Asia. At Bogala Graphite Lanka PLC in Sri Lanka, high-quality

ore is mined underground. This unique vein graphite is purified, sieved and milled to be prepared for the global market.

In doing so, maintaining the highest safety and environmental standards is a matter close to our hearts at AMG. Our products not only help our customers to minimize negative environmental impacts. Protecting the environment is an important part of our focus on sustainable development as defined by the United Nations Global Compact.

Award for the best underground mining site

Bogala Graphite Lanka was delighted to receive a special award. On June 5, 2024, which was World Environment Day, it received the Sri Lanka National Award in the “Best Practised Underground Mining Site” category from the Geological Survey and Mines Bureau. State Minister Janaka Wakkumbura presented the certificate to Saliya Gunasekara, General Manager of Bogala Graphite Lanka, in recognition of sustainable and environmentally friendly best practices.

Saliya Gunasekara, General Manager of Bogala Graphite Lanka, accepts the award



Taking responsibility: strengthen local communities

At AMG Brasil, the appreciative corporate culture and the active sense of responsibility are the basis for a close dialog with all stakeholders – and for sustainable business success. The respectful treatment of all employees, the lived value system of diversity and inclusion, the everyday and implemented responsibility in dealing with the communities in the region of Nazareno, Minas Gerais, makes AMG Brasil outstanding.

Raiane Marques dos Santos Silva

Raiane has always wanted to transform healthcare. Inspired by her childhood marked by difficulties in public health-care, she studied nursing and saw AMG as an opportunity to learn and develop herself. In almost a year of internship, she discovered the role of prevention. She highlights the welcoming atmosphere of the company, which values well-being and respect among everyone.

Eduardo Expedito Viana

Eduardo, a Journalism student, has found in AMG an environment that values his authenticity and creativity. Having been with the company for almost a year, he appreciates the respect and diversity he observes in daily life. For him, the practice of AMG’s values is inspiring and strengthens his desire to grow and learn in this welcoming space.





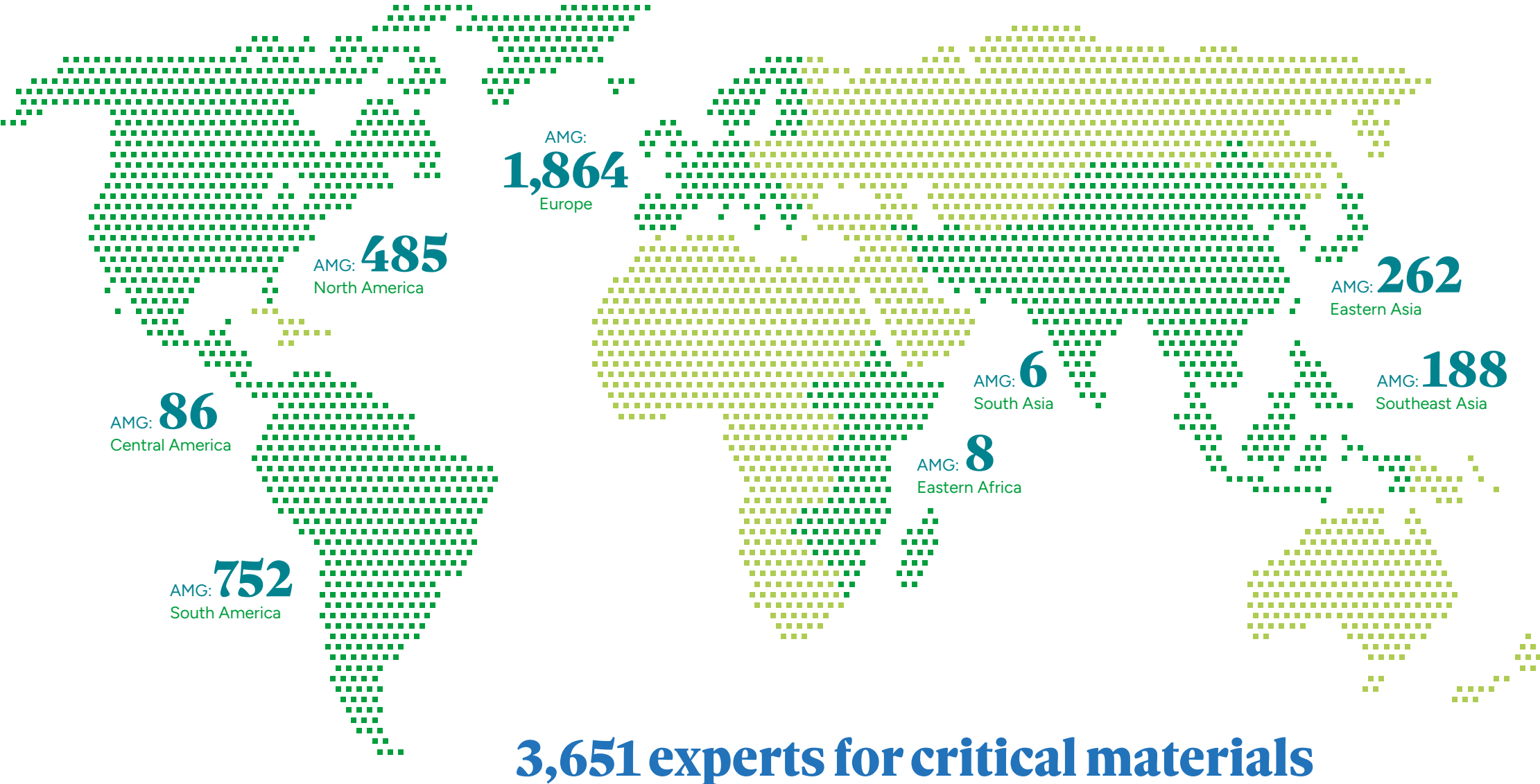
Sebastiana Francisca dos Santos

Sebastiana, a resident of Coqueiros, found new possibilities through AMG Brasil: since 2023, she has taken part in theater workshops, where she discovered her expressiveness and gained confidence. The company also enabled embroidery workshops, allowing her to fulfill a childhood dream.

Rosângela Aparecida Silva Santos

Rosângela, working as a cleaner, has been for 16 years with AMG as a third-party worker and values the company’s impact on her community, Capelinha. And she is proud of her son being an AMG employee without having to leave the city. Fulfilled, she appreciates the interaction with all the departments and the care of the security team, applying at home the safety lessons learned.





Imprint

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Title: Getty Images,
pages 2–30: AMG Critical Materials N.V.

