

**MIG Material Innovative Gesellschaft mbH**  
Innovating for a healthy and sustainable built environment



## Message From CEOS



Dipl.-Chem. Ing.  
**Burkhard Brandt**  
CEO & R&D Director



Concrete Specialist  
**Wolfgang Bonder**  
CEO & Business Development Director

The year 2021 marks our 20th year in business – a significant milestone we are extremely proud of.

Despite being overshadowed by the pandemic, it is particularly gratifying to be celebrating this anniversary as the future is looking bright for sustainable construction. Demand for eco-friendly, innovative building products continues to grow with increased global awareness of the impacts of climate change, and MIG is at the forefront developing new, resilient solutions to improve human quality of life by supporting the health and wellbeing of the natural environment.

Living up to its purpose of promoting health and climate protection, MIG evolved from a small business concentrating on just one single product in 2001 into a multi-faceted company with diversified product offerings, tremendous capacity for innovation and worldwide partnerships today.

Besides continuing to enhance our core business -

chromium (VI) reduction and thin-layer insulation coating system - we commit ourselves to constant product, process and organisational innovation to address the changing needs of our customers and stakeholders. We also look beyond the horizon and adapt our business model by embedding sustainability across our business to reduce the impact of buildings on our world.

Our dynamic team consisting of material specialists, chemical engineers and industry experts is passionate about finding innovative solutions to future proof our buildings, making them healthier, more comfortable and energy efficient while taking environmental sustainability into consideration.

We'd like to take this opportunity to thank all our employees, customers and partners for your ongoing support. We look forward to making further contribution to building sustainability in the next 20 years and more with all of you!

# Timeline (2001 - 2021)

**2001** MIG was founded by Dipl.-Chem. Ing. Burkhard Brandt and Concrete Engineer Wolfgang Bonder, both having held senior roles in their previous careers with extensive experience in the building chemicals industry. Production of chromium VI reducing agents based on tin (II) sulphate was launched in the same year.

**2009** MIG moved its operation from Paderborn's Technology Park to Salzkotten. Production launch of chromium VI reducing agents using Antimony (III) oxide. Launch of MIG-ESP<sup>®</sup> insulation coating line.

**2012** Participation in a coating development project funded through ZIM - Central Innovation Programme for SMEs, a government initiative that fosters the innovative capacity of SMEs.

**2015** Kickoff of the EU-funded project BuildHeat for systemic retrofit of residential buildings across Europe, focusing on heating and cooling consumption attenuation.

**2016** MIG products entered the Chinese market.

**2017** MIG's partner in China was recognised as one of the country's "Top 100 Innovators".

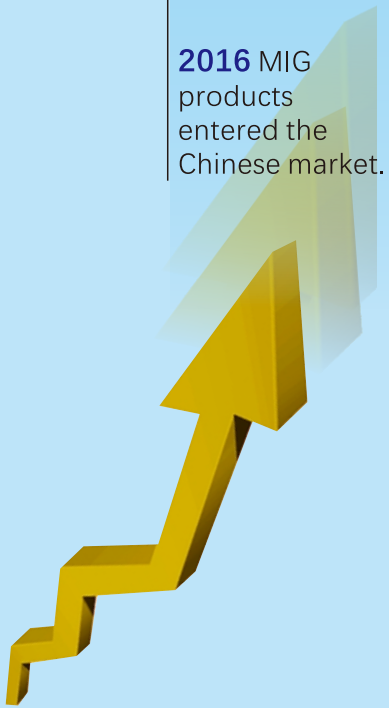
**2019** Completion of the BuildHeat project. MIG was identified as "Key Innovator" by the EU's Innovation Radar.

**2020** MIG Pacific – MIG's branch office in Melbourne, Australia – was established to serve the Australasian market.

**2021** Planning to implement a new manufacturing process for Chromium (VI) reducers to increase resource operational efficiency.

**WE DON'T JUST  
DEVELOP CONSTRUCTION  
MATERIALS**

**WE SIGNIFICANTLY CONTRIBUTE  
TO HEALTH AND  
CLIMATE PROTECTION**







## Sustainability is our growth driver

At MIG, we strive to go beyond sustainability because we believe doing less harm to the environment isn't enough – we can take bold, proactive steps to create more added value for both human and nature. This in turn can translate into abundant growth opportunities leveraging our innovative strength and resourcefulness.

We ensure that the triple bottom line – people, planet and profit – is incorporated in the entire value chain, from product design, procurement, manufacturing and consumption to disposal. We see it as our responsibility to not only conserve resources when developing our own products, but also help our customers enhance the sustainability of their products and quality of life.

The journey from “less bad” to “more good” offers us ample opportunities to develop innovative products and optimise existing processes to address the increasing need for climate-friendly solutions.

## Innovation is in our DNA

As an innovative and agile company that is always ready to adjust itself to remain responsive to changes, we dare to explore the unbeaten path by constantly experimenting with new formulas and different processes to attain continuous technological improvement. However, innovation is not confined to the domain of R&D at MIG. In general, we adopt innovative approaches to problem solving. Out-of-the-box thinking is encouraged at every level of our business such as streamlining workflows, operational performance, etc. We also provide our staff with the freedom and resources to nurture unorthodox thinking and its application.

## Quality is our top priority

Our products are subject to rigorous quality control which is embedded in every stage of our manufacturing process, from raw material sourcing to delivery, with the goal of providing the best solutions for our customers and stakeholders.



## Niche is what sets us apart

Since its existence, MIG has carved out its own market niche, partly due to the nature of the special segment we find ourselves in, partly because it fits our strategic positioning – we value quality over quantity. Our products are not mass produced. Instead, they're manufactured based on a mix of batch and custom production according to stringent quality standards that involve sophisticated processing. We work closely with our customers and help optimise individual customer production tasks for the benefit of their own business. At the same time, our products offer very good value for money for the premium quality.



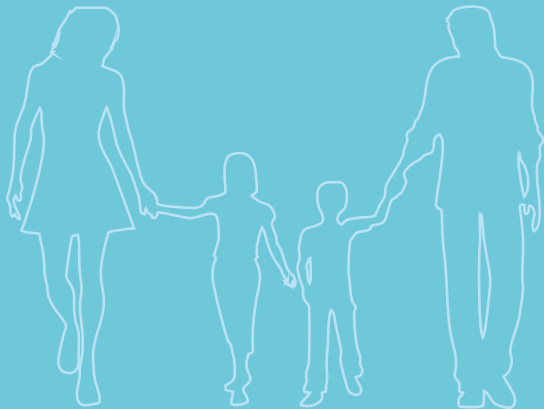


# The Challenges

Our planet is facing a number of grave challenges with climate change being the most pressing. The effects of it are already being felt: rising temperatures, heavy rain, extreme weather events, etc., which threaten the durability and long-term performance of our buildings. On the other hand, the pandemic has instilled a new sense of safety and hygiene in the public for their living environment.

**It is essential to ensure a resilient built environment with more safety, energy efficiency and health benefits for sustainable living while keeping our natural environment intact.**

Factors like more time spent indoors, the maintenance of building functions and indoor environmental quality make our buildings increasingly energy hungry. This in turn is adding to our carbon footprint. More energy use means more CO<sub>2</sub> emissions, the main culprit of climate change.



To tackle this, countries across the world are ramping up their climate ambitions. Over 60 countries have pledged to achieve carbon neutrality by the second half of the 21st century, with some of them being even more ambitious. This is a huge challenge but also a great opportunity, especially for the building sector, because both renovation and new construction offer a great means to save energy and reduce carbon emissions.

Against this backdrop, how is MIG helping to solve these global challenges?



# Our Solutions

## Chromate reduction

For occupational safety, health and environmental protection

MIG is a global market leader in developing high-quality chromium VI (Cr(VI)) reducing agents in cement or cementitious preparations for the protection of health and environmental safety.



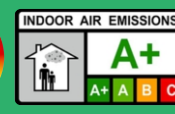
Water-soluble hexavalent chromium in cement is a well-documented health risk. It is a common cause of occupational allergic contact dermatitis, especially among workers in the construction industry. This has resulted in a European legislation which limits the maximum permitted level of chromates to 2ppm. Cr(VI) compounds in cement are also a serious environmental threat once they get into the groundwater, because they can cause drinking water contamination and the accumulation of toxic compounds in the environment.

MIG was a pioneer in chromate reduction well before the EU's legislation. Since its founding, it has set a new benchmark for the industry. One of MIG's founders, Burkhard Brandt, was the first person to use stannous II sulphate to reduce soluble Cr(VI) in cement or preparations containing cement. Later on, antimony trioxide in an innovative encapsulated form was added to our range of high performance Cr(VI) reducing products. Our products are unique in terms of efficiency, dosage, reduction stability and environmental friendliness. They enable efficient, durable reduction of Cr(VI) even at very low dosages without diminishing cement performance or harming the environment. Needless to say, we never shy away from pushing the boundaries of innovation – we keep optimising our techniques and processes to stay on top of industry trends.

**MIG holds a considerable number of national, European and international patents.**







MIG-ESP® is the solution that brings both energy efficiency and health benefits together.

## MIG-ESP® thermal insulation coating system

Harmonising health and energy efficiency

Based on DHMb® (Double Hybrid Membrane), a micro-porous membrane technology that reflects thermal radiation and regulates moisture, MIG-ESP® coating system resembles a normal paint, but it is in essence a thin layer thermal insulation applied on walls, ceilings and roofs to improve indoor comfort and save energy.

As modern buildings have become increasingly airtight for the sake of energy savings, most of our living spaces are climate controlled. Ironically, this practice defeats its own purpose – sealed spaces are not only an ideal breeding ground for harmful air pollutants, mould and bacteria, resulting in Sick Building Syndrome, but also consume a lot of energy. This explains why buildings-related CO<sub>2</sub> emissions have risen rapidly in recent years.

We need a solution that brings both energy efficiency and health benefits together.



This is how MIG-ESP® comes into play. With its heat reflective and moisture regulating properties, MIG-ESP® is designed to improve energy performance of buildings to reduce emissions whilst creating a healthy, hygienic indoor climate for occupants. MIG-ESP® proves that decarbonising our buildings and maintaining a healthy living environment are two sides of the same coin. Energy efficiency doesn't have to compromise health.

No extra energy is needed to maintain a comfortable, healthy living environment. Instead, we can save energy while enjoying more thermal comfort!



MIG has been recognised as **Key Innovator** by the European Commission's Innovation Radar for its development of an innovative active insulation façade coating for the EU's energy-efficient retrofit project BuildHeat. MIG is featured on the Innovation Radar platform accessible via this link:

<https://www.innoradar.eu/innovator/934661058>



# Continuous New Research

MIG not only seeks to fulfill expectations but also endeavours to modify or create products and processes for revolutionary changes.

For example, we have performed successful experiments on the fire resistance behavior of our MIG-ESP® fire protection coating series, which lead to entirely new material properties that are excellent for applications in industries like automotive and aviation. Another great example is the design of a new manufacturing process for our Cr (VI) reducing agents involving zero-emission techniques while at the same time securing output maximisation.

Our commitment to ongoing innovations enables us to stand out with unique and effective solutions to new challenges.



# Our International Network



We bring together the experience and unique expertise of our ventures and partners worldwide to create synergy for mutual growth. MIG is keen to embrace new cooperation and bring our healthy, sustainable construction solutions into new markets.

## Contact Info

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 **Years and Counting**