

2023

The Sustainability Report for BILSTEIN GROUP companies





Marc T. Oehler,
CEO and Partner
BILSTEIN GROUP

Dear readers,

The sluggish economic growth in Europe right now represents a real challenge for many industrial companies, including the BILSTEIN GROUP. But that doesn't mean that sustainability issues – especially green transformation – are forgotten. In fact it's the opposite: they are still incredibly important to us. Whether it's cutting-edge processes and production methods or new, innovative products that break open embedded market structures and significantly reduce CO₂ emissions compared to our existing portfolio – these things continue to dominate the minds and work of our employees each and every day. They are doing everything they can to help us maintain our leading position and provide our customers and partners with the best possible solutions.

I'd like to touch on a few highlights from 2023:

Together with our partners Kueppers Solutions and Westfalen AG, in May 2023 BILSTEIN successfully commissioned the world's first annealing line

operated exclusively using hydrogen – a huge leap forward in technology that demonstrates the BILSTEIN GROUP is well positioned to replace natural gas with (green) hydrogen.

With its innovative steel fibre for the construction industry, STABILS, the BILSTEIN GROUP is entering a whole new market segment. The awarding of the CE marking in September 2023 marked a key milestone here.

And we're also making good progress when it comes to changing the culture of our company. The "BILSTEIN GROUP: facing the future together!" project has resulted in a number of suggestions on improvements we can make, and we're working hard to implement these. Last year also saw the continuation of employee interviews, where our people were given the opportunity to voice their positive and negative feedback on the company.

But irrespective of the macroeconomic situation and the various projects we're spearheading at the BILSTEIN GROUP, there is one critical point that makes it very difficult for us as a company to achieve our ambitious goals right now – and that's the lack of stability in political decision-making. On 15 November 2023, the German Federal Constitutional Court annulled a government decision to repurpose funds originally intended to fight the coronavirus pandemic for the country's climate and transformation fund. The fact that the government was completely unprepared for this ruling means that we can no longer completely rely on funding for affected projects – such as the acceleration of green hydrogen initiatives through the government's "climate protection contracts". Even our most fundamental plans in recent years – like transitioning our

process heat generation from natural gas to hydrogen – now have a big question mark over them. From an economic perspective, it simply won't be possible to transition to using hydrogen in the foreseeable future without reliable funding.

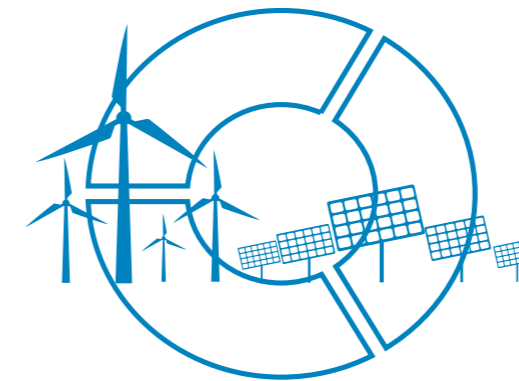
Repeatedly new and changing bureaucratic requirements are also unhelpful when it comes to executing our business strategy, which is planned several years in advance and is largely based on the green transformation.

To summarize: these are challenging times, both economically and politically. But the BILSTEIN GROUP is staying true to its principles and working hard on innovative projects that will help to accelerate the green transformation. We're sure that many of you, our readers, share our hope for a more reliable backdrop in which to do this, without all this uncertainty.

I hope you enjoy reading the latest Sustainability Report of the BILSTEIN GROUP.

Kind regards, Marc T. Oehler

December 2023



Management Board resolution of 17 May 2021 on sustainability and climate neutrality in the BILSTEIN GROUP:

The BILSTEIN GROUP Management Board hereby resolves that, by 2035, the (German) companies in the BILSTEIN GROUP will make their production, logistics and administrative processes carbon-neutral, provided that sufficient carbon-neutral (renewable) energy sources are available by then (i.e. electricity/hydrogen as a substitute for fuel gas).

Furthermore, by 2035, depending on the availability of raw materials and on customer expectations, the BILSTEIN GROUP commits to transition a large proportion of its raw material procurement to steel grades that have either been produced in a way that is carbon-neutral or that results in a significant reduction in CO₂ emissions compared with today.

2035

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There's no future without climate protection!

Climate change, greenhouse gases, limited resources ... As the list of challenges grows, a "business as usual" approach is no longer an option for energy-intensive sectors like the steel industry – and not just because of the German government's climate goals. Conserving energy and raw materials, and reducing greenhouse gas emissions, have long been key drivers of the BILSTEIN GROUP's strategy.



Michael Ullrich,
Chief Technology
Officer

“ Although the current economic situation is taking up most of our attention right now, we are still purposefully making our way towards climate neutrality – which includes projects around raw material procurement and adapting our production technology. Steel will always be a key material. However, the steel industry continues to be one of the largest industrial emitters of CO₂. This is why sustainability remains such an integral part of our company strategy, with a particular focus on reducing our CO₂ emissions. In our processes, CO₂ is emitted

during the combustion of natural gas, so we're driving forward the development of the technology we use in this area. Our goal is to identify alternatives that enable us to replace gas, which is a fossil fuel, with carbon-neutral energy sources and production processes. For some time now, we have also focused on making our processes more energy efficient. We're using cutting-edge technologies such as energy recovery and the conversion of process heat, like in our annealing procedures. And we're continuously developing our comprehensive heat recovery and energy monitoring systems. 🌱



Bernd Grumme,
Chief Sales and
Procurement Officer

“ The biggest driver of our CO₂ emissions is still our raw material, which we procure with a CO₂ footprint that we don't have any direct control over. We're working closely with our suppliers on this point. Last year, we successfully turned some of our strategic plans into tangible actions: the BILSTEIN GROUP secured over 30,000 tonnes of low-

carbon steel for 2024. By 2028-29, our aim is to ensure that at least 50 per cent of the raw material we procure is either low-carbon or carbon-neutral. We also have a seven-year agreement with the Swedish start-up H2 Green Steel worth several hundred million euros, which should guarantee additional volumes. This innovative company uses production processes that reduce CO₂ emissions by 95 per cent compared to conventional steel manufacturing with blast furnaces. These volumes of low-carbon hot-rolled strip are crucial for us in terms of our new product BILCO₂ – our cold-rolled strip with a significantly lower CO₂ footprint. 🌱



Dimitar Yotsov,
Chief Process and
Information Officer

“ The journey to a low-carbon or carbon-neutral future in steel production has begun; it's starting to gain traction in the industry. To accelerate the transition, companies across the steel supply chain are adopting the carbon accounting model to determine the CO₂ footprint of steel products. This accounting model is also the basis for our new

product, BILCO₂. The model has given us a transparent and practical solution that enables us to meet our customers' demand for cold-rolled strip products with a lower carbon footprint, in an industry-leading way. It means we can already model future market requirements – requirements that will one day become standard – in our logistics and back-end systems. We're being extremely innovative in this field to ensure we're able to serve future needs effectively. All these initiatives are good examples of how systems and processes can provide efficient support for the BILSTEIN GROUP's sustainable business models. 🌱



The BILSTEIN GROUP at a glance

The BILSTEIN GROUP develops cold-rolled strip solutions for customers worldwide, meeting the needs of the market as a full-service provider with a complete range of products. This expertise is the result of a rich 112-year history. The company's close relationship with its customers and employees, commitment to the highest quality standards, and extensive knowledge and expertise are particularly noteworthy, while its entrepreneurial mindset is innovative and focused firmly on the future. This is evidenced in our increasingly highly automated and digitalized production landscape, which results in resource-efficient processes and higher-than-average levels of process reliability and production quality.

The BILSTEIN portfolio encompasses a range of specialist products and services for customers in the automotive and mobility industry. In particular, the BILSTEIN AHSLA ranges meet especially high demands in terms of component strength, which goes hand in hand with weight and cost benefits. BILSTEIN steel is used to make components such as pressure regulators, seat rails, airbag housings, bearings, deep-drawing and fine-blanking parts, clutch plates, and much more.

HUGO VOGELSANG offers specialty cold-rolled strip products for customers in the sawing and cutting industry, including high-grade and tempered steel. Thanks to innovative control systems, the products comply with extremely tight tolerances. Products can be individually tempered in line with customer requirements and adapted specifically to the application in question.

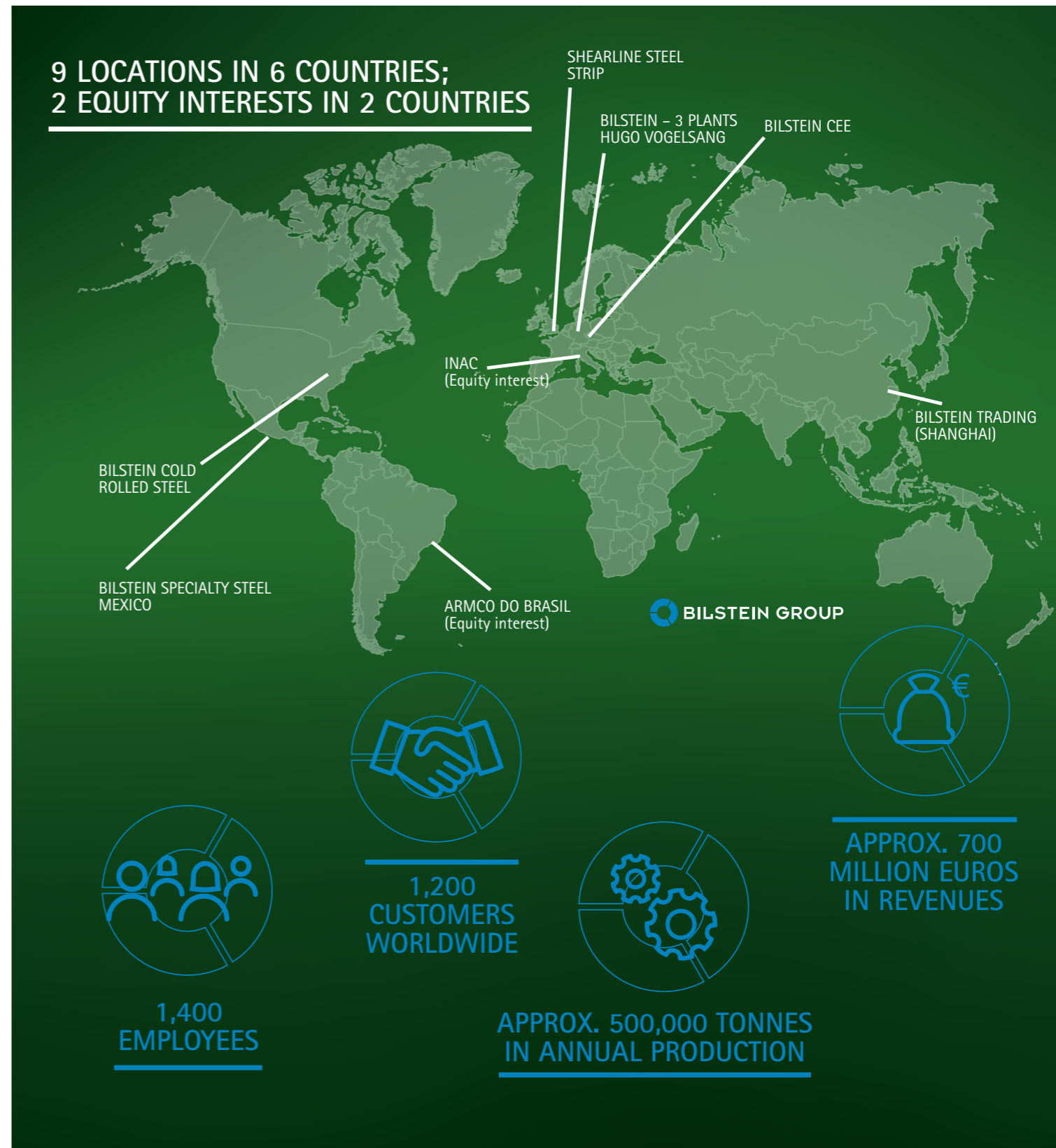
Among other things, HUGO VOGELSANG steel is used to make circular saw blades, chainsaw links, band and gang saws, doctor blades, knitting needles, knives, hand tools and spring elements.

Based in the western Czech Republic, in Králův Dvůr the cold-rolled strip manufacturer BILSTEIN CEE is the BILSTEIN GROUP's base in Eastern Europe. Its broad portfolio includes soft iron grades, micro-alloys and carbon steel grades. The company site is also home to a hardening and tempering plant.

BILSTEIN COLD ROLLED STEEL started operating in the USA in 2017, serving customers across North and Central America from its location in Bowling Green, Kentucky. A key part of the company's set-up is a state-of-the-art wide-strip rolling mill. BILSTEIN COLD ROLLED STEEL caters to the needs of the international automotive and tooling industry, as well as other sectors.

In December 2022, the BILSTEIN GROUP took its first step in a new market segment with the launch of its innovative steel fibre STABILS and the new company BILSTEIN STEEL FIBER GmbH, which was established especially to manufacture and market the product. With the development of this novel steel fibre for use in reinforced concrete, a crucial composite material, BILSTEIN GROUP now has access to an extremely fast-growing segment of the construction sector.

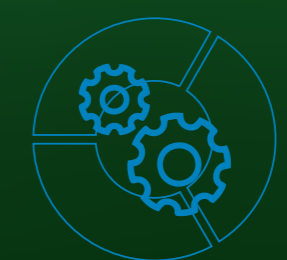
Meanwhile, work is currently underway to establish BILSTEIN SPECIALTY STEEL MEXICO – or BILSTEIN MEXICO for short – a BILSTEIN GROUP distribution company headquartered in Mexico City that will enable the group to serve the exciting growth market in Latin America. BILSTEIN MEXICO will soon apply for an import licence so that it can act as a supplier to the Mexican market and provide services from its base there.



1,400 EMPLOYEES



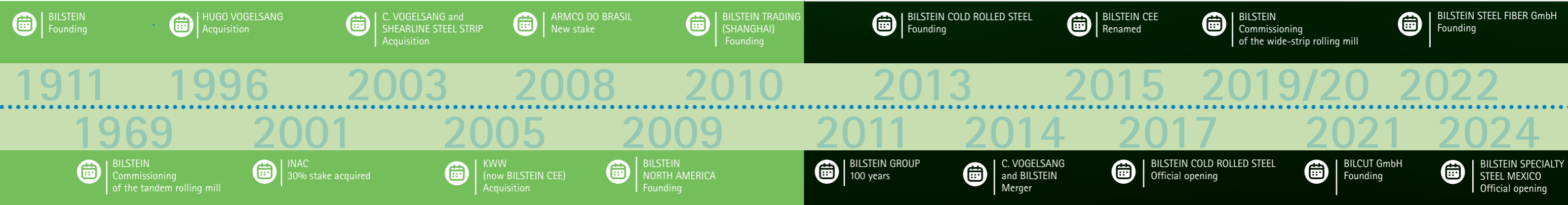
1,200 CUSTOMERS WORLDWIDE



APPROX. 500,000 TONNES IN ANNUAL PRODUCTION



APPROX. 700 MILLION EUROS IN REVENUES



The whole picture: what makes us special

The BILSTEIN GROUP's strategy is based on the strong foundation of customized cold-rolled strip solutions, manufactured and delivered under the umbrella of an international full-service provider. Sustainability is one of seven key pillars that guide all our decisions around the future of our business.



The compass
Strong social, ethical and environmental values dictate all decisions and actions at the BILSTEIN GROUP.

THE SUPPORTING PILLARS

Market presence

By helping accelerate market trends like e-mobility and shifting its focus purely from the automotive sector, the BILSTEIN GROUP is aiming for excellent market coverage and high customer penetration.

Service

By digitalizing and standardizing its processes, the BILSTEIN GROUP will be able to uphold its outstanding levels of service in future. In other words: we can provide the same high quality service in a highly dynamic environment.

Innovation

With innovative projects like BILCUT® and STABIS, the BILSTEIN GROUP is expanding its business model. We aim to increase our focus on non-automotive sectors as well as new growth segments and regions. Through innovation, the BILSTEIN GROUP has successfully ...

Value creation

... boosted the value added of products related to cold-rolled strip. These are the pillars that stabilize and support our business model.

The people

Our employees are the beating heart of our firm. After all, it's our people who breathe life into the BILSTEIN GROUP, by showing up for the company and working hard day in, day out. And they are back in the spotlight with our cultural transformation project, "BILSTEIN GROUP: facing the future together!"

The roof

Two complementary elements span all the BILSTEIN GROUP's activities.

Firstly, our **international positioning** shapes the entire company. Thanks to the opportunities under this shared roof, the BILSTEIN GROUP is one of the strongest international partners for cold-rolled strip applications.

The BILSTEIN GROUP is a **full-service provider** with a broad portfolio of products and specifications. All our companies are housed under this roof.

Clear focus on the market

The BILSTEIN GROUP's regional structure and set-up is pioneering. Meanwhile, BILSTEIN COLD ROLLED STEEL in the USA plays a key role in reducing our dependence on the European market. The ongoing cooperation with a Chinese cold-rolling company is also significant. As home to the largest automotive market in the world, and in future the world's biggest population, China holds all kinds of exciting opportunities and potential.



Our vision
To become the preferred partner for customers worldwide through bespoke cold-rolled strip solutions, sustainability and service.

Digitalization

Key digitalization projects and the introduction of the UDINA service platform for customers are raising the bar and making our processes more efficient and agile.

Sustainability

Whether it's focusing on topics like replacing natural gas with hydrogen and using green steel, investing in the innovative Swedish steelmaker H2 Green Steel, or establishing our own carbon accounting model so that we can pass on CO₂ savings to customers along the supply chain of a cold-rolled strip coil – for the BILSTEIN GROUP, investments in sustainable projects are investments in the future viability and success of our company.

State-of-the-art plant technology

Keeping pace with rapid technological change – this is the goal of our focus on cutting-edge plant technology and is behind all our investment decisions in this area. This applies to the German locations of BILSTEIN and HUGO VOGELSANG, as well as the design and construction of state-of-the-art plants at BILSTEIN COLD ROLLED STEEL in the USA and at BILSTEIN CEE in the Czech Republic.

Das Kaltband.

The foundation

Bespoke cold-rolled strip solutions and high-quality service throughout the product life cycle – this is the underlying foundation of the BILSTEIN GROUP. And our new brand slogan captures this perfectly: "The cold-rolled strip".

Why visionaries are vital

Driving resource and energy efficiency has always been important to the BILSTEIN GROUP. Our resolution to make all our production, logistics and administrative processes carbon-neutral by 2035, provided sufficient renewable energy sources are available by then, is based on a deeply embedded, ISO-certified environmental management system.

At our Hagen-Hohenlimburg location, as well as at BILSTEIN COLD ROLLED STEEL in the USA and BILSTEIN CEE in the Czech Republic, the BILSTEIN GROUP deploys state-of-the-art plant and equipment that is designed with energy and resource efficiency top of mind.

While measures like these do reduce energy costs over the long term, this certainly isn't the only incentive when making these kinds of investments: "If you only look at these kinds of investments through the lens of economic factors, then most of the time you'd probably come to a different decision. This applies to almost everything we're integrating. Up until 2021/2022, electricity and gas were simply priced too cheaply in Germany," explains Michael Ullrich, the BILSTEIN GROUP's Chief Technology Officer. "We've always made sure our investments align with our corporate values; after all, resources are limited, and we want to help protect the climate and environment. At the end of the day, I've got kids too, and I like living on this planet."

Extensive energy monitoring

Against this background, the BILSTEIN GROUP is taking every opportunity to make its processes and production steps as sustainable as possible. Comprehensive energy monitoring is helping the company to do this, especially at its German plants, where more than 700 metres and sensors send around 7,000 measurements to the system every 30 seconds. "In terms of the comprehensive capture, collection and analysis of data, we are well ahead of our competitors," says Michael Ullrich.

Ongoing process optimization

The BILSTEIN GROUP is also constantly scrutinizing its own processes: together with its customers, the company is optimizing its production steps to reduce


electricity and gas consumption and minimize energy use and CO2 emissions as much as possible. With its process optimization department, the BILSTEIN GROUP has an entire team available to advise customers in this area. "If we can work together with customers to improve our processes to the point where we can eliminate an entire annealing process or rolling procedure, then that has a positive impact on our entire footprint," says Michael Ullrich.

Supporting the transformation





"Our strategy is all about aligning the BILSTEIN GROUP's supply chain with the goals of carbon neutrality and the transition to electric mobility," explains Michael Ullrich. To do this, the BILSTEIN GROUP is investing in adding value across its supply chain, in new technologies, in different materials; there are plenty of innovative ideas in the pipeline. The aim is to successfully support the transformation already underway in the automotive sector to electric vehicles, as well as to tap into new business segments.

Innovative, climate-friendly steel





It's clear that something has to change. Right now, the entire supply chain, from steel production to the end product, makes up around 30 per cent of industrial CO₂ emissions.

At the same time, there's no doubt that, on account of its outstanding product properties and great recycling opportunities, steel will remain an important material going forward – especially in wind power, automotive and construction industries. "That's precisely why it's so important to invest in carbon-neutral technologies and processes now, and to continue to be a pioneer in innovative, climate-friendly steel," says Michael Ullrich. 

What are the BILSTEIN GROUP's sustainability goals?

-  To prevent any avoidable environmental pollution caused by our production processes and employees
-  To minimize unnecessary use of resources
-  To continue to improve sustainability in all areas
-  To implement yearly defined actions, including those from the energy management system in accordance with ISO 50001

How is the BILSTEIN GROUP helping to achieve these goals?

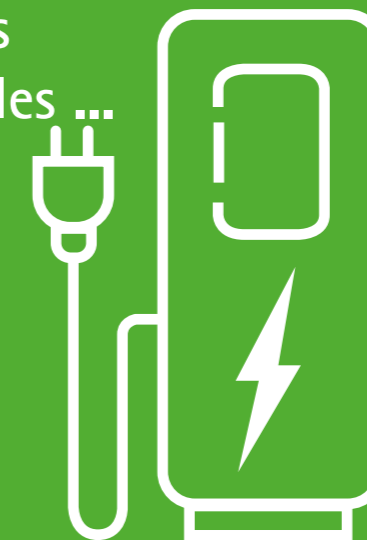
-  Sustainable procurement
-  Applying innovative processes and methods for conserving resources
-  Refurbishing energy systems
-  Implementing new technologies

Every small action counts:

-  Reducing waste and scrap
-  Lowering energy use by switching off things when not in use (lights, heating, air conditioning and ventilation systems)
-  Eliminating compressed air leaks
-  Ensuring the workplace is clean and tidy to reduce hazards for workers and the environment
-  Employee suggestions on how to reduce our environmental impact and improve energy use
-  Waste separation for recycling purposes

Charging stations for electric vehicles

The electric vehicle charging stations installed by the BILSTEIN GROUP are accessible to employees, customers, suppliers and other visitors so they can charge their vehicles while on the company premises. The stations at the biggest plant are already in use, with between 100 and 150 charges being carried out monthly.



... and e-bikes

Living in the fast lane: since July 2023, 24 e-bike charging stations have been available to employees at our three locations in Hagen-Hohenlimburg, with more planned.

Also since the summer, workers have had the opportunity to lease their own electric bike via the company – including insurance and warranty.



Key figures: Energy and water use in plants

An ongoing environmental and energy management initiative is supporting the BILSTEIN GROUP to reduce carbon emissions and water use in its production, logistics and administrative processes.

CONSUMPTION AND KEY FIGURES IN 2020, 2021 AND 2022

| | 2020 | | 2021 | | 2022 | |
|------------------------|-----------|----------------|-----------|----------------|-----------|----------------|
| | BILSTEIN | HUGO VOGELSANG | BILSTEIN | HUGO VOGELSANG | BILSTEIN | HUGO VOGELSANG |
| Electricity (in GWh) | 46 | 20 | 52 | 19 | 51 | 19 |
| Natural gas (in GWh) | 104 | 37 | 126 | 36 | 118 | 35 |
| Heat recovery (in GWh) | 4 | | 6 | | 5 | |
| Groundwater (in m³) | 1,525,150 | 34,220 | 1,715,971 | 28,913 | 1,718,058 | 25,762 |
| Mains water (in m³) | 6,857 | 5,288 | 7,839 | 5,710 | 8,968 | 7,265 |
| Waste water (in m³) | 18,050 | 15,170 | 23,064 | 13,650 | 26,287 | 15,979 |

Did you know?
The proportion of renewable energy in the electricity mix at the BILSTEIN GROUP's German sites was **66%** in 2023.



Certifications

The BILSTEIN GROUP companies work continually to improve our quality, environmental and safety management systems. These are all certified to international standards by third parties.

You can view all the BILSTEIN GROUP's current certifications at <https://www.bilstein-gruppe.de/en/downloads-2/> or here:

QUALITY MANAGEMENT CERTIFICATIONS

BILSTEIN + BILSTEIN SERVICE
IATF 16949:2016
Valid from 14 November 2023
Valid to 13 November 2026

BILSTEIN + BILSTEIN SERVICE
IATF 16949:2016
Valid from 14 November 2023
Valid to 13 November 2026

HUGO VOGELSANG
ISO 9001:2015
Valid from 28 January 2021
Valid to 27 January 2024

HUGO VOGELSANG
IATF 16949:2016
Valid from 28 January 2021
Valid to 27 January 2024

BILSTEIN CEE
ISO 9001:2015
Valid from 9 June 2021
Valid to 8 June 2024

BILSTEIN CEE
IATF 16949:2016
Valid from 26 May 2021
Valid to 25 May 2024

ENVIRONMENTAL & ENERGY MANAGEMENT CERTIFICATIONS

BILSTEIN + BILSTEIN SERVICE + HUGO VOGELSANG
ISO 14001:2015 | ISO 50001:2018
Valid from 14 November 2023
Valid to 13 December 2025

BILSTEIN CEE
ISO 14001:2018
Valid from 16 April 2021
Valid to 15 April 2024

The cold-rolled strip of the future




BILCO₂ – cutting-edge cold-rolled strip

High quality cold-rolled strip with a reduced carbon footprint: that's BILCO₂. This innovative product connects the breadth and depth of knowledge we've developed since the founding of BILSTEIN & Co. (BILCO, for short) in 1911, together with our ambitious vision: achieving a significant reduction in the CO₂ footprint of BILSTEIN GROUP steel products.

The BILSTEIN GROUP offers BILCO₂ for all its steel products and grades, both at BILSTEIN and HUGO VOGELSANG. Customers can choose from three classifications of low-carbon steel:

- 2,000 kg CO₂equivalent per tonne
- 1,500 kg CO₂equivalent per tonne
- 1,000 kg CO₂equivalent per tonne

Since introducing BILCO₂ to the world in late summer 2023, the BILSTEIN GROUP has a cold-rolled strip with a significantly lower CO₂ footprint in its portfolio – with zero restrictions in terms of raw material origin, grade, volume and dimensions.

"Climate change affects us all. The steel industry is one of the biggest emitters of greenhouse gases, and the faster it can make progress in reducing the emissions of its downstream processes, the better off everyone will be. Ambitious projects like BILCO₂ are helping us to do this," explains Marc T. Oehler, CEO and Partner of the BILSTEIN GROUP. 

Das Kaltband.

The carbon accounting model – a cornerstone of BILCO₂

One approach to reducing the carbon footprint of steel products that is rapidly gaining traction across the supply chain is the carbon accounting model. The BILSTEIN GROUP is among the companies to have implemented this model. It enables us to provide customers with low-carbon cold-rolled strip that can be easily reproduced, in as transparent a way as possible.

And it's proving popular: the carbon accounting model is currently the steel industry's solution of choice when it comes to reducing the CO₂ footprint of steel products along the supply chain. "The model definitely has one or two weaknesses, but at present it's the best solution available for passing on CO₂ reductions to customers throughout the entire supply chain, with as much transparency as possible. Directly attributing CO₂ savings is so complex that it's almost impossible for us to do with a broad product portfolio like ours – and it doesn't work at all for recycled materials," says Marc T. Oehler, BILSTEIN GROUP CEO and Partner.

The basic principle behind the accounting model is simple: it collects all the production-related CO₂ savings achieved through the various measures implemented across the process chain. Any improvements or optimizations that the BILSTEIN GROUP would have carried out anyway, i.e. for economic reasons, are not included – they have to be targeted steps to reduce the company's greenhouse gas emissions. These savings are then verified by an independent third party and tallied together in a virtual memory. This memory calculates the actual savings achieved and allocates them to the respective products.

Validation by an external certifying body

With more than 7,000 cold-rolled strip products that all vary in terms of strength and dimensions and that undergo different energy-intensive processing steps in the BILSTEIN GROUP's plants, the carbon accounting model offers a reliable solution for calculating real CO₂ savings and passing them

on to customers. The BILSTEIN GROUP's carbon accounting model was certified by the external body GUTcert and revalidated in November 2023.

Carbon accounting for all products and steel grades

The true CO₂ savings achieved in actual processes across the supply chain can be allocated to any product using the carbon accounting model. The biggest benefit is that, if customers request specific grades that the steel manufacturer can't provide in a low-carbon variety, the BILSTEIN GROUP can use the accounting model to pass on the desired CO₂ savings anyway – because the savings have been achieved elsewhere during production.

Certification documents

On 9 March 2023, the BILSTEIN GROUP received confirmation of compliance for the carbon accounting model at its German companies BILSTEIN and HUGO VOGELSANG, from the external certifying body GUTcert.

You can view the relevant documents at <https://www.bilstein-gruppe.de/en/downloads-2/> or here:



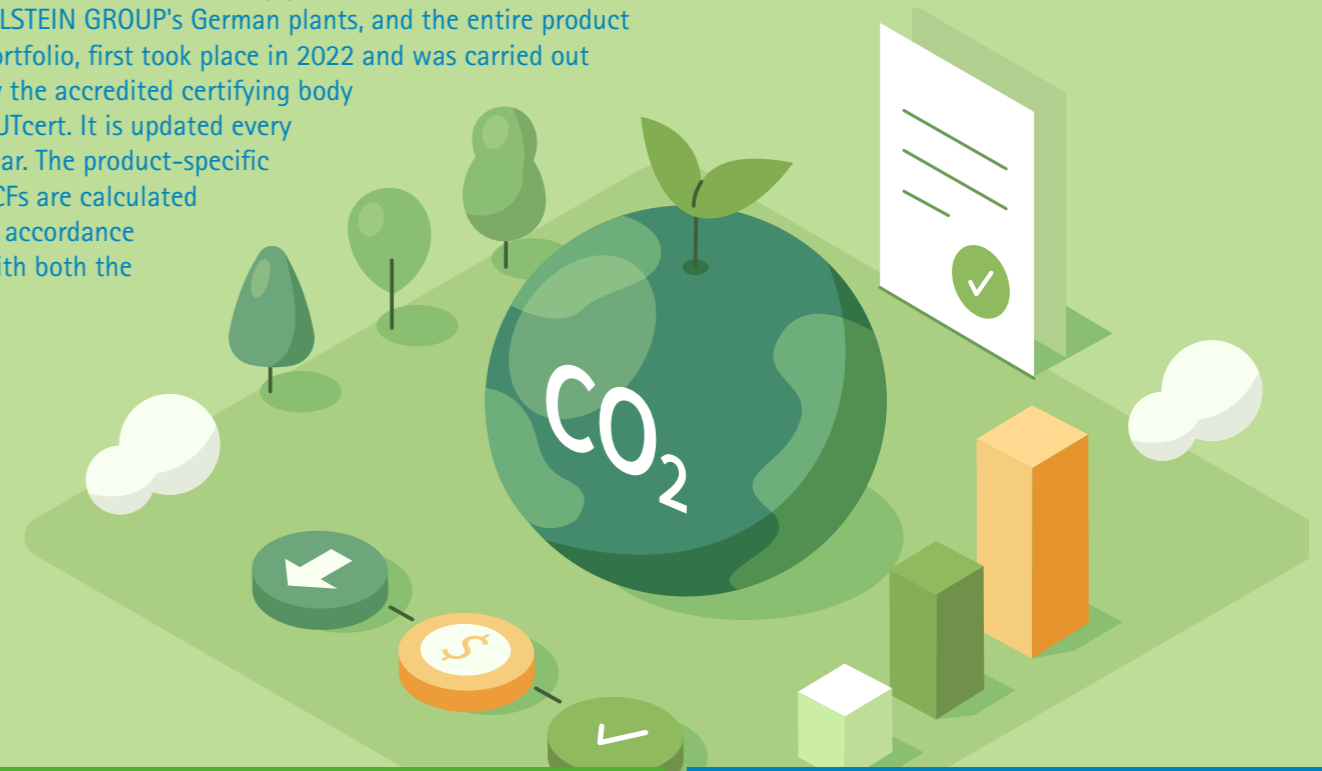
It all begins with the product carbon footprint (PCF)

The carbon accounting model is based on the product carbon footprint (PCF) of an individual product. At which plants is it manufactured? How much green electricity is used? Which energy sources are used and how much? All these factors influence the PCF, which is recalculated in November each year using the latest emissions factors.

The BILSTEIN GROUP has developed a validated tool to help it calculate the PCF for each of its more than 7,000 individual cold-rolled strip products. Validation of all the BILSTEIN GROUP's German plants, and the entire product portfolio, first took place in 2022 and was carried out by the accredited certifying body GUTcert. It is updated every year. The product-specific PCFs are calculated in accordance with both the

Greenhouse Gas (GHG) Protocol Product Standard and ISO 14067.

During the 2022 reporting year, there was ...
 ... a volume-weighted average of 2,382 kg CO₂equivalent per tonne across all BILSTEIN plants.
 ... a volume-weighted average of 2,613 kg CO₂equivalent per tonne across all HUGO VOGELSANG plants.



The transition to green steel products

To reduce the CO₂ footprint of a BILCO₂ cold-rolled strip coil, the BILSTEIN GROUP relies on three key measures:

- Using a low-carbon raw material with reliable external validations
- Using electricity from renewable sources
- in the medium term, replacing natural gas with carbon-neutral hydrogen

The actual CO₂ savings are tallied together in a virtual memory and later allocated to all BILSTEIN GROUP products.

What this means in practice: the CO₂ savings from certified raw materials – in other words, proven low-carbon hot-rolled strip – are sent to a virtual memory. The same happens with CO₂ savings achieved through the use of electricity produced using renewable energies and, where available, carbon-neutral hydrogen (H₂). These savings are then added up in the memory and passed on to the BILSTEIN GROUP's customers.

Resource-efficient production

The efficient use of resources is also a key focus of the BILSTEIN GROUP. And the company is already setting benchmarks when it comes to making its own processes more energy efficient. The following strategic projects are underway:

- Working with customers to optimize production processes
- Developing production technologies with suppliers
- Expanding the company's in-house heat recovery system
- Continuing the decarbonization strategy, for example, by potentially switching from using natural gas to hydrogen

While these factors are not taken into consideration in the carbon accounting model, they do have a positive impact on the underlying calculation, i.e. the PCF. Thanks to our strategic focus on resource-efficient production processes, the PCF is much higher than it would be without these efforts. This means that less of the CO₂ savings available in the virtual memory have to be used to achieve the final, desired emissions value for a given product.

What is the CO₂ footprint of the BILSTEIN GROUP's German locations?

To maximize transparency, the BILSTEIN GROUP has also calculated the corporate carbon footprint (CCF) for BILSTEIN and HUGO VOGELSANG. This is a key parameter for defining the future direction of our sustainability strategy.

A corporate carbon footprint (CCF) takes into account both an organization's internal greenhouse gas emissions as well as external emissions that occur along the company's specific supply chain. In other words, it consists of both the direct and indirect emissions of the entire organization. Unlike the product carbon footprint (PCF), it also accounts for emissions that

arise outside of the boundaries of a company, for example, employee travel, shipments, etc.

In 2021, the BILSTEIN GROUP calculated its CCF for the first time in accordance with the GHG Protocol Corporate Accounting and Reporting Standard as well as ISO 14064, and it has been regularly updated since. 

Scope 1

Direct greenhouse gas (GHG) emissions
Emissions from sources that are under the ownership or control of the BILSTEIN GROUP, including emissions from combustion in its own plants or those under its control (boilers, furnaces, vehicles, etc.); as well as emissions from chemical production in processing facilities owned or controlled by the group). Scope 1 GHG emissions are calculated based on the volumes of commercial fuels purchased (such as natural gas and heating oil) using the professional emissions accounting software GaBi. The basis for emissions factors data is the Ecoinvent life cycle database (version 3.6).

To distinguish between direct and indirect emissions sources, the BILSTEIN GROUP uses the standards set by the Greenhouse Gas Protocol, with emissions broken down into Scopes 1, 2 and 3:

Scope 2

Indirect GHG emissions from sourced energy
Indirect emissions under Scope 2 refer to greenhouse gas emissions resulting from energy generation. They include electricity that is bought into the organization – and therefore all the emissions produced during electricity generation.

Scope 2 GHG emissions are calculated based on the company's electricity consumption and the supplier-specific, local network, as well as other published emissions factors.

Scope 3

All other indirect GHG emissions
Scope 3 emissions are the result of the company's activities, but come from sources that are not under the direct ownership or control of the company. Hot strip steel is the most significant indirect source of emissions, with its production making up approx. 95 per cent of total Scope 3 emissions.



AN OVERVIEW OF GREENHOUSE GAS EMISSIONS

| Scope | | Unit | 2021 | 2022 |
|----------------------------------|----------------|---------------------|-----------|---------|
| Scope 1 | BILSTEIN | t CO ₂ e | 26,524 | 24,610 |
| | HUGO VOGELSANG | t CO ₂ e | 7,798 | 7,689 |
| Scope 2 (location-based) | BILSTEIN | t CO ₂ e | 20,438 | 21,617 |
| | HUGO VOGELSANG | t CO ₂ e | 7,460 | 7,874 |
| Scope 2 (market-based) | BILSTEIN | t CO ₂ e | 11,699 | 29,627 |
| | HUGO VOGELSANG | t CO ₂ e | 9,565 | 10,756 |
| Scope 2 (location-based)* | BILSTEIN | t CO ₂ e | 1,027,227 | 939,898 |
| | HUGO VOGELSANG | t CO ₂ e | 142,989 | 138,231 |
| Scope 2 (market-based)* | BILSTEIN | t CO ₂ e | 1,026,877 | 940,219 |
| | HUGO VOGELSANG | t CO ₂ e | 143,073 | 138,347 |
| Scope 1–3 total (location-based) | BILSTEIN | t CO ₂ e | 1,074,188 | 986,126 |
| | HUGO VOGELSANG | t CO ₂ e | 158,246 | 153,795 |
| Scope 1–3 total (market-based) | BILSTEIN | t CO ₂ e | 1,065,100 | 994,247 |
| | HUGO VOGELSANG | t CO ₂ e | 160,435 | 156,688 |

* including hot strip steel and upstream energy provision

I Sustainable Procurement & Processes



Resource and energy efficiency are guiding principles for the BILSTEIN GROUP. All our strategic decisions aim to align our supply chain as closely as possible with the goals of carbon neutrality and electric mobility. We set the bar high – both for our own processes, and for the suppliers we source our raw materials from. That's why the BILSTEIN GROUP is investing in new technologies and embarking on a range of projects to be able to supply climate-neutral steel in the future.



Green steel: from fantasy to reality

Purchasing CO₂-reduced hot-rolled strip is the most effective way for the BILSTEIN GROUP to sustainably reduce the carbon footprint of its products. And both traditional smelting works and more modern start-ups are offering relevant solutions and products in this area. This is crucial to the continued growth and viability of the steel industry – and for BILCO₂, our innovative, low-carbon cold-rolled strip.

From iron ore to the plant gate: the CO₂ content of a steel product is calculated across its entire life cycle, from initial extraction of iron to steel production and downstream processing, to finishing the final product. More than 90 per cent of the carbon footprint of a BILSTEIN GROUP cold-rolled coil is emitted in upstream processes. Exploring new solutions and approaches here is essential for the future sustainability goals of the BILSTEIN GROUP, and critical to the new product, BILCO₂.

When reducing emissions becomes an industry priority
"When it comes to green steel, our suppliers have already made a lot of progress. Whether it's electric arc furnaces or using "green" sponge iron, or the carbon accounting model, we are already seeing some solutions that will help to significantly reduce carbon emissions in steel production," reflects BILSTEIN GROUP CEO and Partner Marc T. Oehler, optimistically. Meanwhile, the BILSTEIN GROUP has come to supply

agreements with several large steelmakers for the short and long-term procurement of significant volumes of low-carbon steel grades. In 2023 alone, the company sourced more than 30,000 tonnes of low-carbon steel. "We want to solidify our position as an innovative and sustainable partner in the industry and have CO₂-neutral or reduced steel make up more than 50 per cent of the raw materials we use by 2028-29," explains Marc T. Oehler.

Transformation: a driving force

The BILSTEIN GROUP's ambitious CO₂ reduction goals aim to anticipate the needs and expectations of customers and other stakeholders in an industry-leading way. Right now, it is not completely clear how much green steel is available. But pioneering projects like the Swedish start-up H2 Green Steel are helping to propel the transformation of the steel industry. The new steelmaker is guaranteeing a supply of mostly carbon₂-neutral steel.

H2 Green Steel: a new industrial revolution

It's a project that is continuing at record-breaking pace. After H2 Green Steel got the green light to build its 5-million-tonne capacity steel mill on 1 July 2022, excavation work commenced just a few weeks later. By 2025-26, the almost 270 hectares of land in Boden-Luleå will be home to hydrogen, iron and steel plants. A number of other milestones have

already been achieved during the project: on 1 June 2023, the environmental court in Umeå, Sweden, gave the plant a full environmental permit – giving the company the green light to actually start operating. Furthermore, on 7 September 2023, H2 Green Steel successfully secured an additional capital boost of 1.5 billion euros.

The plant will begin production in 2025-26 and, by 2030, have an annual production capacity of 5 million tonnes of high-quality green steel. H2 Green Steel's steel production will produce 95 per cent fewer CO₂ emissions compared to traditional smelting works.



Three paths to low-carbon steel: approaches of traditional steelmakers

In future, the key variable that will determine whether we can replace coke with hydrogen in the traditional blast furnace route, and thereby reduce carbon emissions, will be ensuring a reliable supply of hydrogen. The same goes for electric arc furnaces, where a direct reduction using hydrogen is important to be able to use low-carbon iron ore instead of or in addition to scrap. But steelmakers are already offering some solutions that enable the supply of initial volumes with a significantly smaller carbon footprint. The BILSTEIN GROUP's suppliers are all exploring different methods:

Electric arc furnaces

Çolakoğlu and Salzgitter (SALCOS: SALzgitter Low CO₂ Steelmaking) and her renowned German steel manufacturers are using electric arc furnaces and scrap to produce high-quality steel with a significantly smaller carbon footprint: it only contains around a quarter of the CO₂ content of traditional blast furnace steel. However, there are just a handful of electric arc furnaces located across Europe. They are only used in around 15-20 per cent of steel production – and some of them have been temporarily shut down due to high energy costs. It's a different story in the USA, where 60-70 per cent of steel is made in electric arc furnaces. The BILSTEIN GROUP has close connections to the market there and its new developments through BILSTEIN COLD ROLLED STEEL, based in Kentucky.

Accounting model

The steel manufacturer thyssenkrupp Steel Europe is using an accounting model that enables it to offer steel with up to 70 per cent less carbon, as part of its bluemint® steel product family. The CO₂ savings have been made possible by technology where sponge iron is used to replace some of the coking coal in the blast furnace process.

Certificate sales

Meanwhile, ArcelorMittal is selling green steel certificates under its XCarb® brand to help its customers achieve CO₂ savings. The carbon reductions are achieved through various measures at ArcelorMittal's European production plants, for example, by sourcing green electricity or increasing use of scrap steel.

As an early investor in H2 Green Steel, the BILSTEIN GROUP was among its first customers to sign a purchase agreement for green steel. On 17 April 2023, we signed a binding, seven-year contract to the tune of several hundred million euros. The first deliveries of green steel are expected in 2026.

Additionally, the BILSTEIN GROUP has used technology to reduce CO₂ emissions in its own manufacturing processes for some time now, and with some success. (See the following pages for more on this.) All of which means there is a realistic chance for the company to supply largely carbon-neutral cold-rolled strip from 2030 onwards. 🌱

Alternatives to natural gas: paving the way to a greener future

A reliable supply of green energy is critical to being able to produce carbon-neutral steel. Over the coming years, the BILSTEIN GROUP will convert its infrastructure so that it supports the dual use of natural gas (CH₄) and hydrogen (H₂), with a view to eventually transitioning entirely to the latter. The group is also examining other transformational processes and solutions.

The main driver of CO₂ emissions in heating operations is process heat recovery, which occurs in every step where material needs to be annealed and softened for further treatment and processing. Right now, the BILSTEIN GROUP generally uses natural gas for heat recovery in its production processes. "At the BILSTEIN GROUP, we've set ourselves the target of achieving full carbon neutrality by 2035; based on the technology that's currently available, this means green hydrogen is the only option for us when it comes to powering our plants. So our goal must also be to transition all our internal processes that currently use natural gas to hydrogen" explains Michael Ullrich, Chief Technology Officer. "We want to be ready to use H₂ as soon as the first green hydrogen arrives in Lennetal."

Pioneering technology

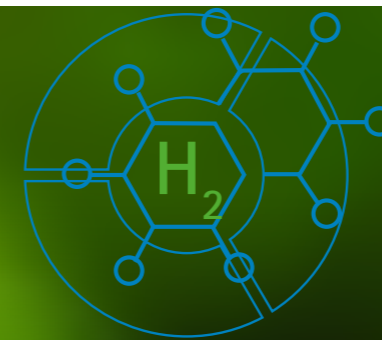
Until that time, the heat treatment plants will continue to operate on natural gas, but should also be ready to use hydrogen – in other words, they need to be equipped for both. The company is currently working on building the corresponding infrastructure. Since 2021, the BILSTEIN GROUP has invested a six-figure sum in researching and developing optimal solutions. Technology like this has only existed in research settings until now – so the BILSTEIN GROUP undertook some truly ground-breaking work in cooperation with a burner manufacturer.

In 2023, the BILSTEIN GROUP tested innovative burners from Kueppers Solutions that can be operated using natural gas or hydrogen in its production environment. In May 2023, the BILSTEIN GROUP achieved the world's first zero-carbon heat treatment of around 100 tonnes of cold-rolled strip in an annealing furnace (see the next page for details).

The next step is to gradually convert all the annealing furnaces at our German plants to hydrogen, encompassing around 600 burners in total. How long this takes will also depend on the availability of green hydrogen.

Demand for green steel grows

Even if lots of companies are facing challenges of a different kind during the current energy crisis, "Carbon-neutral steel remains a huge priority in the industry. As soon as the energy crisis is over, and the economy starts to pick up again, green steel will start to gain traction again. And I'm certain there will be a hydrogen pipeline in Lennetal," says Michael Ullrich, confidently. Ultimately, the region is home to a number of industries that face a clear demand for zero-carbon materials – and without hydrogen, it won't be possible to manufacture in Germany in the long term.



Hydrogen for Lennetal

To secure a supply of hydrogen for Lennetal, a group of companies based in the area – including the BILSTEIN GROUP – joined forces with regional grid operators and launched a new project in 2021. The initiative is the driving force behind the construction of an efficient hydrogen infrastructure. (For more information, see The Sustainability Report 2021.)

BILSTEIN's automotive customers have already communicated very specific requirements around how many kilogrammes of CO₂ a ton of steel can contain from 2030 and 2039 onward, in order for BILSTEIN GROUP companies to be able to continue to supply them. For their part, the automakers are passing on the requirements set for them by the European Union and the German federal government as part of the climate protection programme, but in some cases they are significantly exceeding them.

Exploring all alternatives

Because nobody can know for sure right now when sufficient hydrogen will be available, the BILSTEIN GROUP is also exploring other technologies and approaches.

"From a technological perspective, it's possible to retrofit our annealing lines for inductive heating – even if that is extremely resource-intensive," says Michael Ullrich. "But we're looking at everything right now and exploring a broad range of potential alternatives. Because it's still not clear what the best way is to produce process heat in a carbon-neutral way." The BILSTEIN GROUP is currently in discussions with plant manufacturers and working on relevant concepts.

Visionary H₂ network



The transition to a hydrogen-based economy



There is still no economical way of storing the energy generated by wind turbines, which means the energy source cannot be fully exploited. To prevent networks from being overloaded, lots of operators switch off the plants during strong winds.

Electrical energy, however, can be used to break down water into oxygen and hydrogen via a chemical reaction known as electrolysis. This means any excess renewable energy can be harnessed using electrolyzers.

Experts are expecting electrolysis to play an important role in the transition to a hydrogen-based economy. And the production of green hydrogen is a key factor in reducing the global carbon footprint.

Water vapour instead of CO₂: ground-breaking new technology from the BILSTEIN GROUP

Can a steel-processing company convert its energy-intensive processes from natural gas to hydrogen? That's exactly what an ambitious pilot project in May 2023 achieved, when the BILSTEIN GROUP successfully carried out the world's first local carbon-neutral heat treatment of around 100 tonnes of cold-rolled strip in an annealing furnace.

In 2023, the BILSTEIN GROUP achieved a technological milestone when an entire annealing furnace with 11 burners and a total heating capacity of 1,800 kW was converted from natural gas to hydrogen, in real production conditions and without any losses in output. Until now, this kind of technology was only available in the experimental space. "We're truly groundbreaking!" exclaims Christian Hagenkord, head of sustainability projects and energy supply at the BILSTEIN GROUP. This pioneering work was only possible thanks to close cooperation with various manufacturers.

Dual-operation burners make their world debut
On 15 and 16 May 2023, it was finally time: after two years of research and development work, the first converted annealing furnace began operation – and

everything went smoothly. "From the ignition of the burners through to the very end of the process, not a single gram of natural gas was burned, and we achieved outstanding process parameters. This trial run saved around 3,700 kg of carbon locally," summarizes Christian Hagenkord. "The smokestack emitted water vapour instead of CO₂." This was confirmed by the Gas and Heat Institute Essen, which provided measurement and testing support over the course of the project.

With a production volume of 500,000 tonnes of steel annually, which is what the parent company BILSTEIN was producing prior to the pandemic, this equates to carbon reduction of around 25,000 tonnes – equivalent to the annual carbon emissions of around 2,300 people living in Germany.



"Team hydrogen", which is made up of employees from the BILSTEIN GROUP and its partner companies, is proud of its achievement: the world's first local carbon-neutral heat treatment of cold-rolled strip in an annealing furnace.



Hydrogen's journey to Plant I

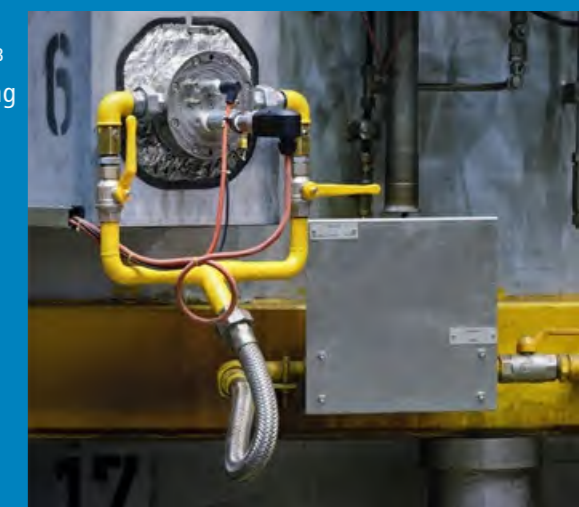
Because the heating value of hydrogen is so low, three times more hydrogen than natural gas is needed to power the burners. So instead of 1,870 m³ of natural gas, around 5,600 m³ of hydrogen was required to anneal around 100 tonnes of cold-rolled strip for several hours at a temperature of 710°C.



For the purpose of the test, energy provider Westfalen AG was able to provide the required volume of hydrogen and the lorry trailer from which the hydrogen flowed directly into a piping system that supplies the annealing furnaces.



At the peak of the process, more than 600 m³ of hydrogen was flowing directly into the plant from the trailer.



Moving closer to our goal

Following a successful feasibility study in mid-2022 on the dual operation of annealing furnace hoods and burners, a decision was made at the end of the year: one hood in the largest BILSTEIN plant would be equipped to operate on both natural gas and hydrogen, as a test piece. Together with Kueppers Solutions, a leading manufacturer of industrial burners, the BILSTEIN GROUP was able to build on and develop the existing burner technology. In the end, the new, innovative burner design was made possible using metal 3D printing. The furnace hood was then converted and the required infrastructure installed. "It was uncharted territory for all the regional parties involved; but we did it together," explains Christian Hagenkord.

What is the business value of switching to hydrogen?

"To be able to use this technology long term, we will need government support and customers who are prepared to pay for it; at the moment, it costs around six to eight times more to power annealing furnaces with hydrogen than natural gas," says Christian Hagenkord. "And this is where the biggest challenge lies: first, there has to be enough hydrogen available locally. Second, the costs of using hydrogen in energy-intensive industries like ours have to be competitive." 🌱



Comprehensive heat recovery: strategic system expansion

Lots of processes and manufacturing steps produce waste heat that can be harnessed and reused. Since 2012, BILSTEIN has been strategically expanding its extensive heat recovery system, to prevent this energy from simply being blown out of chimney stacks.

Over the last few years, the BILSTEIN GROUP has brought to life its vision for resource-efficient production. In April 2020, its biggest plant in Hagen-Hohenlimburg became home to one of the most cutting-edge rolling mills in the world. In combination with the world's first fully automated annealing furnace, which is

linked to a heat recovery system via an Organic Rankine Cycle (ORC), this means precious resources can now be saved at every step along the process chain. The return of waste heat into the process cycle was always a key part of the overall concept. Now, an innovative and complex heat recovery system is helping to significantly reduce the company's CCF Scope 1 emissions, and therefore its carbon footprint.

What are the benefits of the ORC system?



The electricity that the ORC system generates from the annealing plants' waste heat flows straight back into the plant. For each annealing operation – so every time the steel is heated to between 400-700°C, depending on the material, and then cooled again – this saves at least 359 kg of CO₂.

With several thousand operations each year on a total of 32 annealing bases, this means the potential reduction in emissions is huge. The ORC system is specially designed so that additional annealing bases can be connected to it.

Innovation with far-reaching potential

With the integration of an ORC system in its annealing process, the BILSTEIN GROUP has developed a solution that is innovative in every sense. So innovative, in fact, that it was recognized with an award from KlimaExpo.NRW in 2016. In BILSTEIN's largest plant, the ORC system is used to operate a new, fully automated annealing furnace and an annealing line modernized in 2019, both of which have resulted in significant CO₂ savings (see info box).

A sophisticated heat recovery system

Waste heat from the annealing line is used to generate electricity, and some of it also feeds a water cycle. This is the central element of the BILSTEIN GROUP's


extensive heat recovery solution. One large, centralized heat recovery system and an in-plant heat network were built especially for this purpose, and have been continuously expanded since 2012. In addition to the ORC unit, a number of other systems and components where process heat occurs are connected to the water cycle. Waste heat flows into the system from a total of 32 annealing bases in the two annealing plants, as well as from the air compressors in the new rolling mill.

This energy is then used to heat several production halls, warehouses, a joinery and dispatch. The process heat is also used to bring the water-oil mixture in the emulsion plants in the new wide-strip rolling mill and the tandem mill up to the required operating temperature of approximately 50°C. The rolling plant uses a cooling fluid that, paradoxically, must be heated and kept at a constant temperature of around 50°C. As a result, natural gas is only used when no waste heat is available.

Expanding heat recovery to all plants

"At HUGO VOGELSANG and BILSTEIN CEE in the Czech Republic, we're also using the waste heat from the generation of compressed air, for example, to provide heating or hot water," says Christian Hagenkord, Head of Sustainability Projects and Energy Supply at the BILSTEIN GROUP. As well as the air compressors, the annealing plant at HUGO VOGELSANG is connected to the heat recovery system, making almost maximum use of the potential of heat recovery.

Minimizing use of natural gas

The wide strip rolling mill is one of the only lines at BILSTEIN to use natural gas, outside of annealing. To operate as energy efficiently as possible, the mill has a self-contained cooling system: the waste heat from electric motors, converters, pumps and other units that need to be cooled is used to preheat the fresh air flowing into the hall via a water-to-air heat exchanger. Air needs to be fed in from outside as steam and air are discharged during the rolling process. To prevent the hall from cooling down and having to be heated, warm air flows in. 

How does the ORC system work?



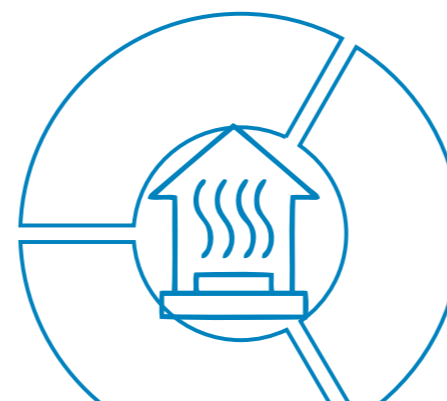
The core element of the system is the thermal oil cycle. During the annealing process, thermal oil absorbs the heat that is lost as the material cools. In the first step in the ORC system, when the material and the thermal oil are hot enough, this generates electricity – via a steam expansion motor and connected generator. This electricity is used to improve the efficiency of the annealing plant; in other words, it is used directly in the operation of the annealing lines, which means they require less electricity from outside the plant.

Once the material is no longer hot enough to feed into the thermal oil cycle and therefore the motor and generator, the annealing plant switches to a water cycle. Here, conventional heat exchangers are used to extract heat from the waste heat. This water cycle is the central element of the BILSTEIN GROUP's extensive heat recovery system.

The ORC plant was sponsored by the German Federal Ministry for the Environment as part of its Environmental Innovation Programme (www.umweltinnovationsprogramm.de).

KlimaExpo.NRW
Motor für den Fortschritt

Ausgezeichnetes Projekt



I Products & Innovations

At its sites in Hagen-Hohenlimburg, the BILSTEIN GROUP operates the most cutting-edge cold-rolled strip plants worldwide. The company pursues its primary goal of producing innovative, climate-friendly steel by leveraging and constantly adding innovative, sustainable technologies. The BILSTEIN GROUP invests in both the development of more environmentally friendly and economical production methods and in pioneering new products.





■ Sales launch for STABILS – our innovative steel fibre

BILSTEIN STEEL FIBER got the green light to officially start selling STABILS on the market after it received the CE marking in September 2023. With this innovative steel fibre, the BILSTEIN GROUP is heralding a new era for a key product used in the construction industry: reinforced steel.

The CE marking confirms that STABILS meets the basic safety requirements of the European Union. With the successful audit on 3 August 2023 and receipt of the certificate on 28 September, everything was in place to finally start selling STABILS on the market.

There is enormous potential for this highly innovative steel fibre. "Our main aim is for STABILS to either fully or partially replace the conventional reinforcement used for concrete on construction sites. It enables construction companies to do away with a very costly and labour-intensive process," explains Jörg von Prondzinski, Head of Application Engineering and Development at the BILSTEIN GROUP and CEO of BILSTEIN STEEL FIBER GmbH.

Analyses carried out in conjunction with universities and businesses, as well as trials on a variety of finished concrete products – including curved and folded plate staircases, as well as slot channel

systems for draining open spaces – have repeatedly shown that, in comparison with conventional reinforcements, STABILS significantly reduces the resources and work involved.

Conventional reinforced concrete ...

More than 100 million cubic metres of reinforced concrete are used every year in Germany, making it the country's premier building material. It is a composite material made from concrete and reinforced steel. In conventional reinforced concrete, long cables are knotted or woven together to form a lattice, which is then put into a mould and filled with concrete.

But you can do the same thing with steel fibres, adding them directly to concrete and moving them into any position. Of course, fibre products are already available on the market, in different lengths; 25–70 mm long wires that can be mixed into concrete and dramatically increase its overall load bearing capacity. The more evenly the fibres

are distributed in the concrete, the better. However, blending the fibres that have been on the market for some time is quite time-consuming and, due to their geometric proportions, sometimes impossible.

... versus the sustainable alternative: STABILS

This is where the high-grade steel fibre made from tempered strips by BILSTEIN STEEL FIBER GmbH comes in. "Each fibre is straight. And they are easy to mix into concrete and to space evenly," explains Jörg von Prondzinski. Anywhere that wire fibres are already in use, constructors can switch over to the BILSTEIN GROUP's higher-quality and easier-to-handle product.

Fibres are not, however, widely used at the moment, and the construction industry mainly works with mesh made from reinforced steel." However, STABILS also offers huge benefits over these conventional reinforcements: thanks to the fibre's excellent properties, reinforced concrete made with STABILS is also more malleable. This makes it a good option for particularly

demanding projects like tunnel construction, for example, as well as for traditional building. Furthermore, thanks to the high degree of stability and improved malleability of reinforced concrete made with STABILS, less steel and less concrete are required overall to achieve the desired result.

The benefits: save on time, money and resources

In times of expensive and dwindling resources, savings on materials alone are a key decision-making criteria. If a construction company needs less concrete on site, they also reap the benefits of reduced transportation and logistics costs, as well as lower greenhouse gas emissions. So, they save time, raw materials and CO₂ emissions in multiple ways.

"Now we just have to stir up the very conservatively regulated German building industry and get it excited about our steel fibre," explains Jörg von Prondzinski. Preproduction is underway – and marketing efforts are in full flow. 🔄

CO₂-reduced construction with the innovative steel fibre STABILS from BILSTEIN

The new steel fibre STABILS enables sustainable construction with a significantly reduced CO₂ footprint. Firstly, because it requires less steel per volume unit of concrete than conventional reinforced steel. And secondly, because it reduces the minimum thickness of concrete elements, meaning less CO₂-intensive cement is needed.



Our first foray into the growth market of electrical steel strip

Electrical steel strip as a product is nothing new; but because of the increase in electric mobility, demand is currently outstripping supply. By tapping into the market for semi-processed electrical steel strip, the BILSTEIN GROUP has an opportunity to become a key player in the process chain for this challenging product.

Electrical steel strip is a special alloy with a relatively high silicon and aluminium content. These components give the steel both metallic and, importantly, electromagnetic properties – in particular highly magnetic flux density and minimal core loss. The combination of these properties provides the levels of efficiency required in everything from commercial vacuums to high-performance motors used in electric cars. The technology has been around for a while. But what makes electrical steel strip so special right now is that, as demand for electric vehicles has increased, so have the demands on the performance of electric motors – and therefore on the product. The lower the core loss, the more efficient a motor and therefore the range of an electric car.

Limited capacities for fully finished electrical steel strip

Large steelworks are the main producers of electrical steel strip. The product undergoes three manufacturing steps there, to produce "fully finished" electrical steel strip, as it's called: cold-rolling, annealing and coating. Only then can the required motor parts, the plates

that make up the stator and rotor, be stamped. But the steelworks only have limited capacity for cold-rolling and the subsequent processes of annealing and coating. This is the bottleneck that's currently restricting the production of electrical steel strip. In Europe alone, there is expected to be a supply deficit of around one million tonnes by 2030.

Semi-processed electrical steel strip: an opportunity for better market access

Semi-processed electrical steel strip offers the BILSTEIN GROUP the opportunity to gain a foothold in this market. "We can bring our expertise and rolling-mill capacities to this fiercely competitive market and in doing so become a part of the supply chain," says Christoph Dahnke, Head of Application Engineering at the BILSTEIN GROUP.

Semi-processed electrical steel strip is of particular interest for customers who already possess their own plants for downstream processing or who are looking to invest in this kind of machinery. The customer that the BILSTEIN GROUP is currently working with to develop the processes

around semi-processed electrical steel strip is making use of plant capacity that it was previously using for production of combustion engine vehicles – while also enjoying improved access to electrical steel strip.

New processes bring new benefits

It also makes sense for the final annealing and coating processes to take place on the customer side from an efficiency and sustainability perspective; for example, the plates required for electric motors can be stamped first and then annealed and coated. This means the plates retain better electromagnetic properties, and that less coated electrical steel strip ends up in landfill after the stamping process.

Fit for market requirements

An electric motor consists of two parts: the housing, or the stator, which creates a stationary magnetic field on the inside, and a rotor, which rotates freely within this magnetic field. Both parts are made from a vast number of extremely thin, electrical steel plates, which are stacked on top of one another to form a fixed steel bundle. The thinner the individual plates – i.e. the thinner the electrical steel strip – the more efficient the motor is. That's why so many engine makers are currently looking to see where they

can procure the thinnest possible electrical steel strip for their projects. The standard thickness for semi-processed electrical steel strip is currently 0.27 mm.

"Our wide rolling mills enable us to produce material that, at 0.2 mm, is not only much thinner, but also has a higher silicon and aluminium content," says Christoph Dahnke, outlining the BILSTEIN GROUP's approach. "Which means we can produce semi-processed strip of the exact thickness the market is currently looking for."

A chance for success

"Projects like this show that the BILSTEIN GROUP will never hesitate to seize new opportunities in the cold-rolled strip space," continues Christoph Dahnke. "And I firmly believe that, with our plant technology and infrastructure in such good shape, we can be very successful with this challenging product." 

Driving technology and sustainability through innovation

Achieving more resource-efficient production with innovative technology: the BILSTEIN GROUP is investing both in the development of pioneering production methods and in new cold-rolled steel grades.

BILCUT® high-speed laser blanking

Developed by the BILSTEIN GROUP in collaboration with the Fraunhofer Institute for Laser Technology (ILT) in Aachen, the BILCUT® high-speed laser blanking procedure for the production of shaped blanks for the auto sector is truly a world first. The patented technology really is cutting edge: firstly because of the extremely high speeds at which it operates. Secondly, by optimizing the cutting process, the BILSTEIN GROUP is now able to produce shaped blanks in an extremely resource-efficient way. Many more shaped blanks can be cut from a coil using the flexible laser cutting head than when using a conventional die, resulting in significantly less waste.

"Every kilogramme of steel that we can save in the production of a component is now twice as important," says Michael Ullrich, Chief Technology Officer at the BILSTEIN GROUP. "Firstly because of the environmental impact, in particular the carbon footprint of steel products, and secondly because of the soaring costs for energy and raw materials."

The proof of concept took place in late 2023 using a 1:1 scale prototype. The BILSTEIN GROUP plans to build a dedicated line at its own location and start production in 2025.

One patent, one revolution: innovative press hardening

With an innovative new press-hardening method, the BILSTEIN GROUP has successfully made a key manufacturing process in the auto supply industry more cost-effective and sustainable. The new process has opened the door for us to discover a new market previously dominated by other key players. It's been an exciting journey – and not just for the BILSTEIN GROUP.

What are press-hardened parts used for?

The auto supply industry uses press hardening to produce structural components for vehicle bodies that need to be able to withstand extreme forces. This includes the pillars that support the entire body of a vehicle, connecting the roof to the chassis. Around 4 million tonnes of steel is used globally in press-hardened parts each year.

A new take on conventional press hardening

In conventional press hardening, shaped blanks are heated to more than 900°C and then simultaneously pressed and hardened in a single step. But because the surface of unprotected steel immediately oxidizes at such high temperatures, the material is coated with a protective aluminium-silicon layer. This comes with disadvantages: firstly, there's the associated cost of coating. Secondly, it makes the entire process less energy-efficient because the protective layer reflects the heat. Furthermore, the patent/licence for this aluminium-silicon coating is held by two metalworking giants, which significantly restricts access to the market for other companies.

The BILSTEIN GROUP's new, patented press-hardening method does away with the need for the usual coating because of the way in which it manipulates the temperature and uses a special protective atmosphere during pressing. This has the potential to open lots of new doors, especially in the current environment where all companies are interested in sustainability and reducing their CO₂ footprints.

Different and attracting: Supermod®, Ultramod® and Extramod®

A growing number of customers are using the BILSTEIN GROUP's innovative cold-rolled strip grades with soft magnetic properties. Supermod®, Ultramod® and Extramod® already feature excellent electromagnetic properties in as-delivered condition, so that they can be used in parts production immediately, without the need for additional annealing. This makes them great alternatives to electric strip made from aluminium-silicon alloy in both an environmental and economical context.

Flagship project: FlexHyBat

How can the various alternative motor concepts (e.g. battery or hydrogen pressure regulators) be integrated into vehicle structures as cost-efficiently as possible – and without significantly reducing vehicle payload? The FlexHyBat project, a lightweight vehicle body platform for light commercial vehicles based on 3D roll-formed profiles, offered an answer. In a world first, FlexHyBat combines high-grade steel with innovative production methods to enable a flexible and economical manufacturing process.

Working with five consortium partners (EDAG, CLOOS, Fraunhofer IWU, data M Sheet Metal Solutions and PROTOMASTER), the BILSTEIN GROUP played a crucial role in the EDAG-initiated project when it came to developing a lightweight vehicle body platform. This pioneering project was supported by the German Federal Ministry for Economic Affairs and Climate Action, and was led and overseen by TÜV Rheinland Consulting GmbH.

"Until now, manufacturing other types of motors was somewhat problematic – but light commercial vehicles make up more than 10 per cent of traffic-related carbon emissions," explain Michael Ullrich, Chief Technology Officer at the BILSTEIN GROUP, and Franz Lorey, Vice President Commercial Vehicles at EDAG. "So, we have to find more efficient, sustainable and economical ways of developing and manufacturing vehicle components in the future."

Three BILSTEIN innovations played a role in the success of the FlexHyBat project:

- Material: BILSTEIN Advanced High Strength Low Alloy (AHSLA)
- BILCUT® technology: high-speed laser blanking (of shaped blanks)
- BILTIC® technology: high-grade cold-rolled strip partially softened with laser treatment



Employees & Society



Sustainability involves acting and behaving in a way that is aligned with our values in the wider context of our responsibility to society. As an international group, BILSTEIN GROUP companies not only comply with all national and international laws; they also attach huge importance to ethical business principles. The BILSTEIN GROUP requires both its own companies and all suppliers and partners to comply with the relevant code of conduct. And for a family-owned business like the BILSTEIN GROUP, fair and value-driven behaviour includes lifting up and supporting people in the company and the local region.

| | BILSTEIN SERVICE | BILSTEIN | HUGO VOGELSANG | Total in Germany | BILSTEIN CEE | SHEARLINE STEEL STRIP | BILSTEIN COLD ROLLED STEEL | BILSTEIN TRADING (SHANGHAI) | Total outside Germany | Total |
|-----------|------------------|----------|----------------|------------------|--------------|-----------------------|----------------------------|-----------------------------|-----------------------|-------|
| Employees | 320 | 560 | 240 | 1,120 | 130 | 20 | 100 | 6 | 256 | 1,376 |

Data as of 30 November 2023



Honest, fair and sustainable around the globe

High quality standards, sustainability and compliance with ethical principles – the BILSTEIN GROUP aspires to and applies these commitments both in its own company and throughout the supply chain.


As one of the world's leading cold-rolled strip providers, the BILSTEIN GROUP companies and their various production and service locations are fully aware of their responsibilities when it comes to complying with international rules and standards. As a result, they are guided by ethical business principles when shaping their company policies.

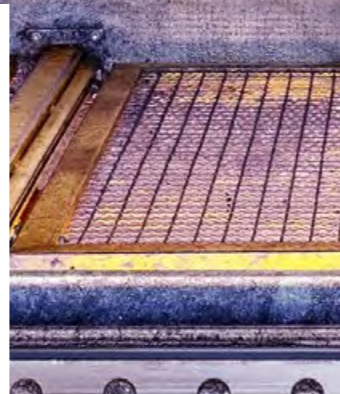
All our suppliers must also commit to upholding the BILSTEIN GROUP's high standards when it comes to complying with quality, environmental management and hazardous substance requirements.



- ✓ Quality management, certified to DIN EN ISO 9001 and IATF 16949
- ✓ Environmental management system, certified to DIN EN ISO 14001 or EMAS
- ✓ Energy management system, certified to ISO 50001 and/or energy audit pursuant to Section 8 of the German Act on Energy Services and Other Energy Efficiency Measures (EDL-G)

RoHS II Suppliers must ensure their products comply with the EU's Restriction of Hazardous Substances Directive II, i.e. ensure they do not contain high concentrations of certain substances listed in the RoHS.

REACH Suppliers must confirm they are aware of their obligations under the REACH Act ([EU] No. 1907/2006). 



Questionnaire for suppliers, manufacturers and distributors



In addition to a code of conduct for suppliers, the BILSTEIN GROUP regularly reviews the environmental policies and certification of manufacturers and retailers, who provide information on their quality management and any concrete steps they're taking to reduce their environmental footprint. The questions they are asked relate to areas such as resource use in production, energy efficiency, and occupational health and safety management in their company.

Code of conduct for suppliers and business partners



Our comprehensive code of conduct for suppliers comprises 13 points. As well as ensuring compliance with applicable laws and regulations and the protection of employee rights, it encompasses a wide range of ethical obligations, such as respecting and protecting human rights, and their responsibility to comply with environmental standards.

Like our own internal code of conduct, this code also prohibits fraud, unfair competition through corruption and money laundering.

- I. Compliance with applicable laws and regulations
- II. Respecting and protecting human rights
- III. Environmental protection and climate action
- IV. Anti-discrimination and employee rights
- V. Offering and granting benefits; conflicts of interest
- VI. Fair competition
- VII. Money laundering
- VIII. Data protection and privacy
- IX. Transparent financial reporting
- X. International trade
- XI. Product safety
- XII. Whistleblowing system
- XIII. Responsible supply chain management and risk management

CSR/sustainability requirements for suppliers



The BILSTEIN GROUP's corporate social responsibility (CSR) and sustainability requirements for suppliers cover the following:

- Human rights
- Child labour and underage workers
- Wages and benefits
- Working hours
- Modern slavery (i.e. slavery, servitude and forced or compulsory labour)
- Freedom of association, incl. collective bargaining
- Harassment and discrimination
- Health and safety
- Environmental protection
- Corruption, bribery and extortion
- Privacy and data protection
- Export control
- Fair competition and antitrust law
- Conflicts of interest
- Responsible supply chain management
- Protection of whistleblowers

Terms and Conditions of Purchase



The BILSTEIN GROUP's General Terms and Conditions of Business also include terms and conditions of purchase that list compliance requirements for suppliers.

You can find the Terms and Conditions of Purchase here: <https://www.bilstein-gruppe.de/en/downloads-2/>



A question of conviction: our compliance management system

With around 1,200 customers located across every continent, all BILSTEIN GROUP companies commit to upholding international laws and regulations as well as a binding code of ethical business principles.

Special consideration is given to the local customs, ethics and guidelines of the countries in which the BILSTEIN GROUP operates. The aim is always to ensure that employees, business partners and customers are all treated in an honest, fair, sustainable and safe way, based on clearly defined corporate ethics. And the BILSTEIN GROUP doesn't just set the bar high for itself; it also expects its suppliers and partners to adhere to these critical, fundamental ethical standards.

Code of conduct

The company has defined its corporate ethics in a code of conduct that is binding for all companies and employees of the BILSTEIN GROUP. The code serves as a guide for all shareholders, advisory board members, members of management boards, directors and employees of all BILSTEIN GROUP companies on how to treat each other and their partners across the globe. As ambassadors of the BILSTEIN GROUP, it is critical that all their actions are aligned with this clearly defined company philosophy.

Supply Chain Due Diligence Act

Independent of the extremely high standards that the BILSTEIN GROUP already requires of its suppliers, these obligations are now regulated by law in Germany following the passing of the Supply Chain Due Diligence Act (Lieferkettensorgfaltspflichtengesetz, or LkSG for short).

On the 1 January 2023, the LkSG became effective for all companies with more than 3,000 workers. One year later, on 1 January 2024, it took effect for companies with more than 1,000 workers, which includes the BILSTEIN GROUP. The LkSG's primary aim is to ensure that companies review their supply chains and check they are compliant with environmental and human rights obligations. These include requirements around risk management, risk analysis, prevention measures and the establishment of a complaints procedure. The complaints procedure requirement is an addition to the whistleblower system that became law in Germany in summer 2023.

Early implementation

A complaints procedure for issues relating to anti-trust and competition law has been in place for many years at BILSTEIN GROUP companies. Furthermore, in the second half of 2022, so way ahead of schedule, a BILSTEIN GROUP internal project group approved the work required to ensure compliance with the LkSG, to ensure the necessary measures are implemented in a timely manner. 🌐

Human rights officers

One recommendation in the LkSG that the BILSTEIN GROUP implemented as soon as the law became effective on 1 January 2024 is the appointment of human rights officers. At the BILSTEIN GROUP, this role has been taken on by Miriam Rensinghoff, who is also our Compliance Officer and Head of Fundamental Principles/Legal.



Read more about the BILSTEIN GROUP's compliance management system on our website:

https://www.bilstein-gruppe.de/cms/wp-content/uploads/2016/12/CMS-BILSTEIN-GROUP_en_2017.pdf



The three pillars of our compliance management system



Code of conduct

The code of conduct is one of the three pillars of the BILSTEIN GROUP's compliance management system. It consists of various sections and includes our policy on safeguarding human and employee rights, environmental protection pursuant to the LkSG and our general principles and rules of conduct.



Anti-corruption guide

The second pillar of the BILSTEIN GROUP's compliance management system is the anti-corruption guide, which serves to help prevent and actively combat any form of corruption or bribery. BILSTEIN GROUP companies actively promote fair competition and do not tolerate any form of corruption, which is a criminal offence in Germany. Ultimately, corruption can have damaging effects on public welfare, the economy and individual companies.

The processes and rules set out in the guide are binding for all employees of the BILSTEIN GROUP and provide guidance on how to deal with gifts. Using a traffic light system, the aim is to reduce the risk of any such infringements of the law to an absolute minimum.



Guide to antitrust law

This guide is intended as a code of conduct to help employees comply with company values and identify any infringements of antitrust law. All BILSTEIN GROUP employees share responsibility for implementing these guidelines in their interactions with customers, colleagues, shareholders and the general public.

The guide to antitrust law is the third key pillar of the BILSTEIN GROUP's compliance management system.

There's lots to keep us busy, and that's how we like it!

The EU's Corporate Sustainability Reporting Directive (CSRD) and the European Sustainability Reporting Standards (ESRS) have increased our obligations and requirements when it comes to sustainability. The BILSTEIN GROUP takes these obligations extremely seriously.

Sustainability in focus: the CSRD and ESRS

Our sustainability principles are firmly embedded and implemented as part of the BILSTEIN GROUP's overarching strategy. In addition to publishing our annual sustainability report, the BILSTEIN GROUP is currently preparing to align itself with the future requirements of the EU's Corporate Sustainability Reporting Directive (CSRD) and the European Sustainability Reporting Standards (ESRS) on burden of proof and reporting. The BILSTEIN GROUP is among the companies required to publish reports from 2025 onwards.

Protection of whistleblowers

The BILSTEIN GROUP complies with all the requirements of the German Whistleblower Protection Act and the complaints procedure pursuant to the Supply Chain Due Diligence Act using software from tacto. Our website features a link to the software, where whistleblowers can send messages anonymously, in any language. Thanks to the software, the compliance officers at the BILSTEIN GROUP are able to process cases, respond to messages and implement corresponding measures directly.

This means the company fulfils the requirements of the Whistleblower Protection Act, which came into effect in July 2023 and relates to employee reports of criminal or administrative offences that endanger the life or health of an individual. The Supply Chain Due Diligence Act (LkSG) also contains the requirement for a complaints procedure that enables individuals both inside and outside the

company to report risks relating to human rights or the environment, or injuries in the workplace or the supply chain.

The BILSTEIN GROUP's compliance management system, which was implemented in 2016, has provided an internal reporting channel via the group's compliance officers and an external channel via the Düsseldorf-based lawyer Glade Michel Wirtz for reports of (potential) infringements against guidelines. These channels will remain open to provide as many opportunities as possible for people to be heard.



The UN's 17 Sustainable Development Goals

As part of the 2030 Agenda of the United Nations (UN), 17 goals for sustainable development have been defined. They are intended for everyone, including governments, civilians, science and the private sector.

In future, the UN's Sustainable Development framework will also be reflected in the sustainability reports, and therefore the annual reports, of companies, with the implementation of the European Commission's European Sustainability Reporting Standards (ESRS).

Climate protection contracts

To help achieve the decarbonization of German industry by 2045, the German government hopes to incentivize businesses to invest in environmentally friendly production via company-specific climate protection contracts. Over a period of 15 years, the climate protection contracts should help offset, either in whole or in part, the additional costs that companies face for transitioning to these new technologies. The tender will take place in the form of a bidding process.

The BILSTEIN GROUP requires funding to be able to switch its processes from natural gas to hydrogen. We took our first step in applying for this funding in summer 2023 by participating in the "preparatory phase" of the programme; our documents were submitted on schedule on 7 August.

The first bidding process was scheduled to take place in late 2023, according to the Federal Ministry for the Economy and Climate Protection. However, after the 15 November 2023 ruling by the federal constitutional court preventing the government from using funds intended to fight the coronavirus pandemic in the climate and transformation fund, the climate protection contracts will require additional financing.

CBAM: a new way to offset CO₂

On 1 October 2023, the European Carbon Border Adjustment Mechanism (CBAM) – a carbon offsetting policy – became effective in the European Union. The mechanism is essentially a carbon tariff on carbon-intensive products, such as steel, that are imported from countries outside the EU.

The BILSTEIN GROUP has already implemented all CBAM requirements in its processes and keeps records of the corresponding data; nevertheless, we currently procure very small volumes of raw material from countries outside the EU.

Our employees are our greatest asset



As one of the leading cold-rolled strip companies, we employ around 1,400 people worldwide in what is a strategically important sector. Our people policy is based on the basic principles of development, appreciation, fairness and teamwork. As part of the "BILSTEIN GROUP: facing the future together!" project, we are zooming in on the culture within our company.

Company celebration

After a pandemic-induced break, in May 2023 around 2,000 people enjoyed our traditional Family Day at the BILSTEIN GROUP's original location in Hagen-Hohenlimburg. Besides employees from our German sites, their families and retired staff, local residents were also invited to attend, to help build understanding and goodwill for the various construction projects underway recently.



Workplace anniversaries

Every year, the BILSTEIN GROUP honours its longest-serving employees who have been with the company for 25, 38 or 45 years. Also in 2023, senior management were delighted to have the opportunity to meet their guests of honour, who they invited to a local restaurant to celebrate the occasion.



Events for retirees

Twice a year, the BILSTEIN GROUP organizes an event for the company's former workers. In spring 2023, management invited the retirees for a meal at a local restaurant, while in autumn they joined us for coffee and cake, together with their partners. Around 130 former workers enjoy these events.

Shaping cultural change

We're putting our people back in the spotlight: after a challenging few years of pandemic-related restrictions, where we were forced to really focus on the numbers, the BILSTEIN GROUP is now working with its employees to define its future business structures. "A strong sense of teamwork and togetherness gives us the best foundation to tackle the challenges in these times of rapid change," says Marc T. Oehler. "We all need to continue to learn and grow, especially right now."

A series of interviews conducted in 2022 with employees in production and maintenance served as the starting point for the "BILSTEIN GROUP: facing the future together!" project and the company's cultural change. The Management Board strongly believes that the experiences, ideas and opinions of workers are essential to making constructive changes. Anyone who wanted to contribute had their voice heard – and employees were open and honest. The BILSTEIN GROUP used the outcomes to develop tangible actions and measures that could be implemented from 2023 onwards. Meanwhile, the employee interviews continued.



Team events



On 2 September 2023, around 20 employees from production and administration at BILSTEIN CEE took part in a traditional dragon boat racing festival. The festival has been running for 18 years, drawing amateur rowers from different towns and companies in the Beroun region. A total of around 30 employees took part in this year's event. Their families also came to cheer on the competitors and soak up the atmosphere together.

Christmas tree party



Traditions are important. In 2023, all employees at our German sites, and their families, were once again invited to join us on 10 December to soak up the festive atmosphere in "Gut Kuhweide", Volmetal, and choose a Christmas tree. One tree was reserved for each employee. And of course, it wouldn't have been a Christmas party without the obligatory "Glühwein and Bratwurst".

Family Day

On 10 June 2023, a perfect summer's day, employees of BILSTEIN COLD ROLLED STEEL brought their families along to the company's Family Day – which included face painting for the kids and a barbecue, among other things.





Work & Family

Balancing work and family is an enormous challenge faced by many workers every day. The BILSTEIN GROUP supports its workforce to the best of its ability in this area, as it recognizes that its employees' mental and physical health is a valuable asset that is worth protecting.

The BUK Familienservice

In collaboration with the organization BUK Familienservice, the BILSTEIN GROUP provides independent and external professional services for all employees at its German locations to help with challenging or stressful life events and situations. The services have been available since January 2019 via phone hotlines, video consultations, email and in-person meetings. Additionally, as of 2022, the service now includes on-line lectures. These interactive webinars are designed so that participants can ask the BUK Familienservice speaker questions, above and beyond the presentation.

1. Childcare

Personalized advice about types and availability of childcare, parental benefits and leave, childcare costs, support for any contractual queries, and much more.

2. Services during school breaks (in Germany)

Select and search for qualified regular and ad-hoc childcare, au-pairs and babysitters, homework assistance, emergency childcare, the BUK holiday programme, etc.

3. Care for dependants

Personalized support for caring for dependants, including care availability, types and levels of care, costs and grants, organizing care, connecting with nationwide support or care services, communications and liaison, and much more.

4. External employee support

Health management through confidential advice and support on topics like work, career, personal life, mental health and addiction. Expert service for HR managers, signposting to further support, etc.

Culture, identification & diversity



In Germany, the average length of employment at the company is more than 15 years, which is significantly above the statistical average of around 10 years.

What's more, the BILSTEIN GROUP has a presence on nearly all continents across the globe. Around 20% of its workforce is based outside Germany. Altogether, BILSTEIN GROUP employees represent more than 50 nations, along with all their different cultures and values. This diversity is also reflected in employee promotion and development.

Family-friendly: it's in our DNA

The BILSTEIN GROUP recognizes that the well-being of its workforce isn't just about what happens in the workplace. After all, employees are first and foremost human beings. Thanks to its services in this area, the BILSTEIN GROUP has been designated a "Family-friendly company".

Work and family

- ✔ Advice on parental leave and returning to work
- ✔ Flexible working hours
- ✔ Kid-friendly workspaces for emergency situations
- ✔ Financial support for childcare
- ✔ Holiday activities and programmes for children of employees
- ✔ Company-wide agreement on remote working
- ✔ Administrative staff have the option of bringing their dogs to work

Internal, personalized support

- ✔ External employee advice
- ✔ Family care: support with organizing care for dependants
- ✔ Rapid financial aid, particularly for family emergencies
- ✔ Support with addiction and money problems

Sustainable transport

- ✔ Employee bike leasing programme (since 2023)
- ✔ Charging stations for electric vehicles

Employee events

- ✔ Family festivals
- ✔ Meet-ups for retirees
- ✔ Workplace anniversary parties
- ✔ Christmas tree programme

Extras

- ✔ Funds for family occasions based on the Social Affairs Act (effective since 01.01.2015)
- ✔ Funds for social issues
- ✔ Benefits in the event of loss of life

Staying active together

- ✔ Participation in various corporate running events

External events

- ✔ National Girls'/Boys'/Parents' Day
- ✔ Management AG
- ✔ Company visits for school classes
- ✔ Participation in Tec Days
- ✔ Presence at various training and careers fairs
- ✔ Participation in Hagen vocational training day
- ✔ Careers information days and internships



Outstanding prospects



The BILSTEIN GROUP is dedicated to the growth and development of its employees and has been a respected provider of outstanding learning and training opportunities for some years now. This was confirmed in 2013 when the company was officially recognized as an "Outstanding Training Provider" by Ertragswerkstatt GmbH. In 2023, the BILSTEIN GROUP once again received this seal of approval – and we'll continue to do everything in our power to ensure we retain it.

The certificate is awarded based on the results of an anonymous survey of trainees and the company's latest apprenticeship numbers. It reflects the company's commitment in this area, the high satisfaction levels among our trainees and apprentices, and their positive view of the training and instruction they receive.

Careers that are built to last



The BILSTEIN GROUP fine-tuned its values and guiding principles in 2023. Meanwhile, an internal campaign was launched to refresh our image as an employer, with valuable contributions from many employees. Their input was fed into the design of a brand new careers website: karriere.bilstein-gruppe.de

Promoting community

National Girls' Day

The BILSTEIN GROUP once again participated in National Girls' Day on 26 April 2023, welcoming local school students to the company for a special day focused on "Careers built to last". The aim was to highlight the various jobs and career prospects available to them in a cold-rolling mill. After a comprehensive tour of the company, the young women visited the laboratory to see the more exciting side of the steel industry.

Regional support and sponsorships

The BILSTEIN GROUP's connections to the local region and people run deep, and we are proud to support culture, science and community in Lennetal.

Regular donations are made to:

- Regional sports clubs and teams
- Local schools
- The Technological Advancement of South-Westphalia charitable association
- Local volunteer firefighters
- Hagen's open-air museum
- The THW (Federal Agency for Technical Relief)



Health and safety

Our health is our most valuable asset, which is why the BILSTEIN GROUP goes to great lengths to ensure its employees get through their working day without any accidents or injuries. For example, highly automated processes boost workplace safety and protect workers against the risk of serious injury. But we don't stop there – we think about the small details, too.

PPE, made locally

Whether it's safety goggles, blue light glasses or earmoulds (custom-fit hearing protection that nestles snugly within the ear canal for a comfortable fit): every employee in Germany has access to a service that provides bespoke personal protective equipment (PPE) in their place of work. And the BILSTEIN GROUP covers the majority of the costs for each new piece of eyewear or protective hearing equipment. Representatives from a specialist company ensure eyewear and ear protection fit the user and their needs. IN 2023, the programme was updated and the PPE is now sourced from suppliers in the local region.

To make some PPE items – for example, the special gloves and sleeves to provide protection against cuts – more comfy, functional and even safer, the BILSTEIN GROUP carried out an analysis in 2023 and organized an in-house event with different suppliers and manufacturers, alongside tests where employees tried on the items in their respective areas of work.

This will be followed by a thorough, "head-to-toe" review of PPE in 2024.



Apprentice safety training

In particular, we provide our younger employees with plenty of safety training, for example, on fire safety and protection.

First aiders and fire safety officers

The BILSTEIN GROUP's competent and well-trained team of first aiders and fire safety officers ensures the safety and well-being of staff at all times. Please join us in thanking all these dedicated workers for their commitment.



Employee bike leasing programme



Our bike leasing programme aims to make it easier for employees to not have to drive to work. The BILSTEIN GROUP has offered the programme at its German sites since June 2023, including bike insurance and warranties.

Health MOTs

From comprehensive check-ups of the heart and circulatory system to simple upper body measurements – these offerings were so popular at the health awareness days that the BILSTEIN GROUP has now made them available on multiple dates.



Accident prevention

In recent years, health and safety in general has moved from being solely technical to taking a more holistic approach to prevention. This is now the responsibility of the HSEQ department, which was formed from a merger between the Quality Management (QM) and Health, Safety and Environment (HSE) teams. The department ensures that all employees in Germany are working in compliance with management systems certified to ISO 9001, ISO 5001 and ISO 14001.

Workplace safety task force

As part of the "BILSTEIN GROUP: facing the future together!" initiative, a task force was formed to focus fully on workplace safety and implement tangible measures and actions. In September 2023, after taking a break during the pandemic, the "Work and health team" resumed its activities at BILSTEIN's biggest plant.



Safety and health awareness days

Besides workplace safety, employees' individual health is of paramount importance. So in 2023, the BILSTEIN GROUP expanded the preventive concept behind its Safety Days to also factor in personal health issues, with the goal of raising employees' awareness around prioritizing health and safety in their day-to-day work. We also regularly provide instruction and training on traffic safety, with a focus on forklift traffic in our plants.



Running together: great for health, fitness and team spirit

Our fitness-focused employees have started a weekly running club, with a route starting and ending at the company premises.

BILSTEIN GROUP employees also regularly enter teams in externally organized runs, including B2Run in Dortmund and the AOK company run in Hagen/Herdecke.

About this publication

Published by:
BILSTEIN SERVICE GmbH
Im Weinhof 36
58119 Hagen, Germany

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External photos:
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H2 Green Steel AB (p. 12),
Smileus – stock.adobe.com
(p. 2, 52), Proxima Studio –
stock.adobe.com (p. 3), Clipart
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