

POWER

#18

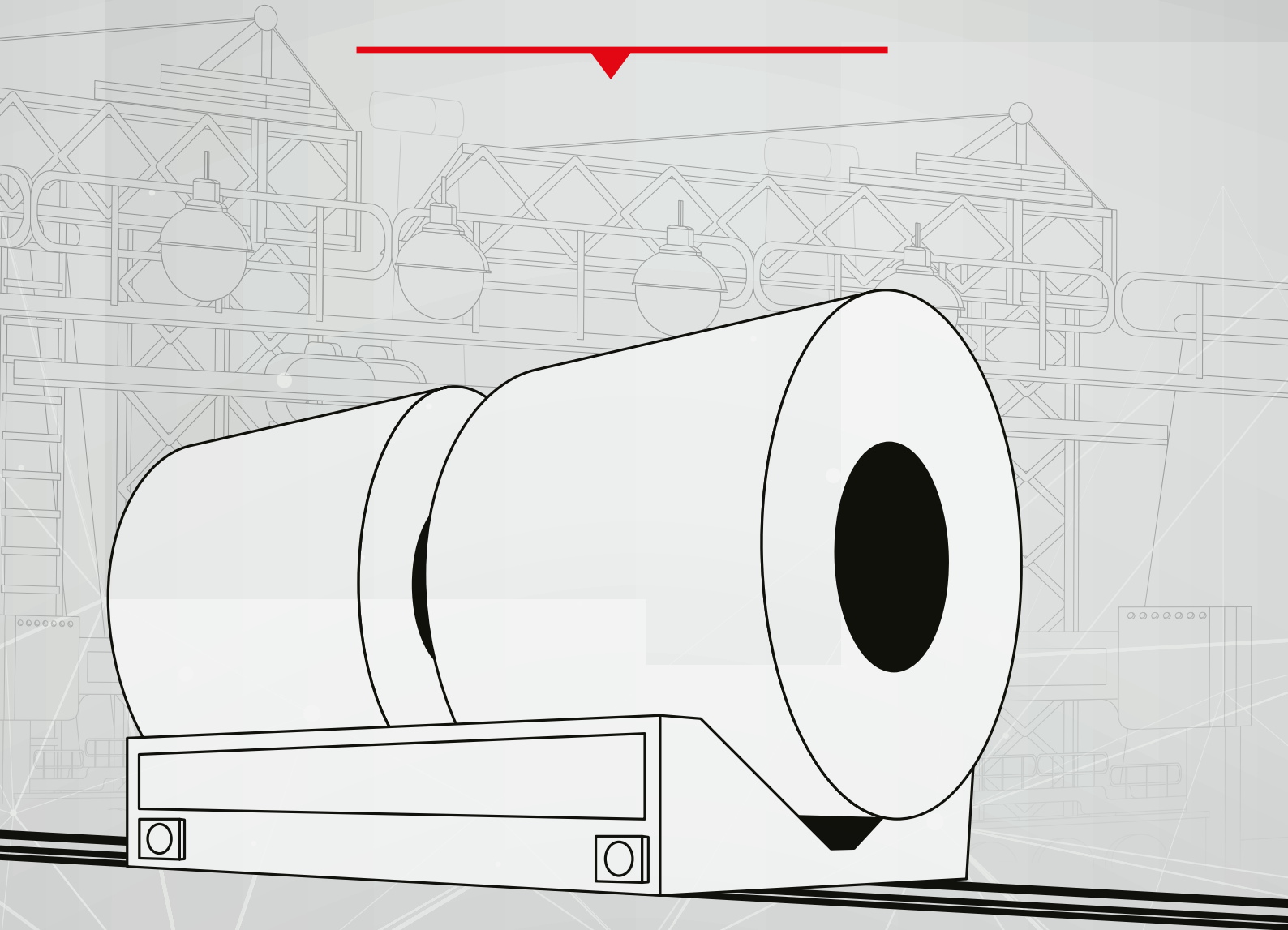
Taking to the Skies

**Drag Chains Bring Aerial
Work Platforms to Life**

Page 18

RUTHMANN

Tempered for Excellence



Loads weighing several tonnes are common in the steel industry. One example is the production of metre-thick, rolled sheet steel, or coils. In rolling mills, special conveying systems, which require an especially robust energy supply that can withstand heat, dust, and other loads, are used to move these coils around. What roles do HELUKABEL solutions play in this? Learn more on the last page!

Go on, take a look!



Dear Reader,

It's found in the bodies of our vehicles and used to build bridges, houses, tools, and utensils—steel is so integral to our lives that it's hard to imagine a world without it. Even industry and high-tech sectors rely on the versatility of steel to create components used in mechanical and plant engineering or instruments in the medical technology industry.

What does this have to do with cables and wires? More than you would guess. Even the manufacturing and processing of steel requires electrical connections that reliably transmit data and power to where they're needed, enduring extreme thermal, mechanical, and chemical loads. For steel mills, solutions need to be top notch, and this is why we think it's worth taking a closer look at them in this issue of POWER.

The HELUCHAIN steel drag chains, for example, perform incredible feats in the factories of our customer HKM where they move steel slabs weighing several tonnes (see more on page 13). The story of the Spanish mechanical engineering company Gurutzpe is equally compelling. By using our pre-assembled drag chains, they were able to almost halve the installation times of their CNC lathes (more on page 14). Both applications symbolise the versatility and problem-solving expertise that allow us at HELUKABEL to overcome the most diverse of challenges.

We've also prepared a number of other engaging topics sure to spark your interest. Whether high up in the sky or down under in Australia, the POWER is back on with even more excitement from the world of HELUKABEL. You won't want to miss what we have in store in this issue!

I hope you find this edition enjoyable and informative.

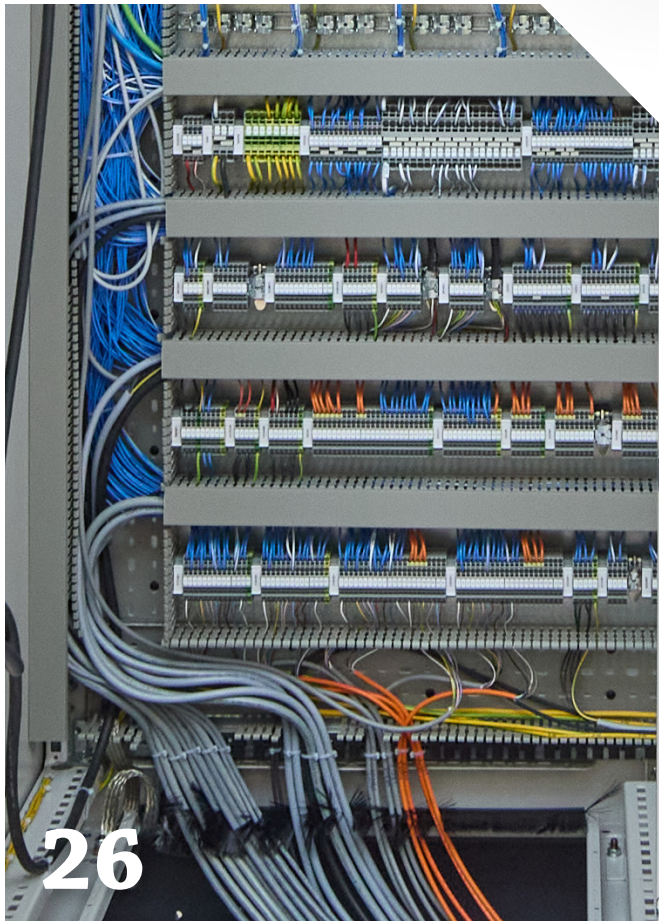
Sincerely yours,

Marc Luksch, Managing Director HELUKABEL GmbH

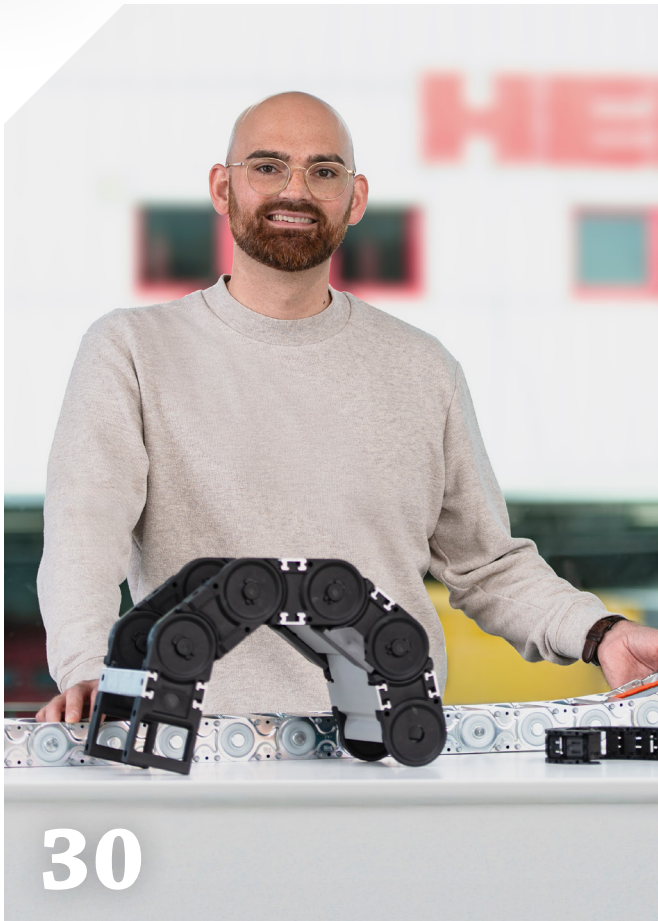


Pre-Assembled Drag Chains for CNC Lathes

Page 14



26



30

POWER #18

8 LET'S TALK ABOUT... THE STEEL INDUSTRY

How our connection solutions beat the heat of the steel industry

13 ROBUST ENERGY TRANSMISSION FOR CRANE SYSTEMS

HKM relies on steel HELUCHAIN drag chains for moving applications

14 LARGE-SCALE MACHINING

Pre-assembled drag chains for Gurutzpe CNC lathes

18 TAKING TO THE SKIES—WHEN THE JOB DEMANDS IT

Light-weight, plastic drag chains bring lorry-mounted RUTHMANN aerial work platforms to life

24 AMBITIOUS, BUT DOWN TO EARTH

HELUKABEL managing director Marc Luksch sits down with VfB legend Cacau

26 ON THE SAME WAVELENGTH

Tailor-made connection solutions for corrugators from BHS Corrugated

30 INTERVIEW

Marcel Olivier, Plant Manager of HELU Connectivity Solutions Haan GmbH

34 PUT TO THE ULTIMATE TEST

Part 7: EMC Tests

06	In Brief
17	Education at HELUKABEL
22	Highlight: Cables for Light-Weight Yachts
36	Worldwide: Welcome to Australia!
37	FAQ: Corkscrews in Drag Chain Cables
38	Connect/Imprint

In Brief

New to the Programme

ALL-ROUNDER FOR INDUSTRIAL APPLICATIONS

With the HELUCHAIN PLASTIC LINK 4-45, HELUKABEL is expanding its portfolio in the area of drag chain systems. This stable, high-performance drag chain is specially designed to tackle demanding industrial applications. It is impressively easy to assemble, operates quietly, and is flexible enough for use in numerous applications.

A NEW SPIN ON INDUSTRIAL LIGHTING

Whether for industrial machines and systems or for ergonomic workstations, the new brand HELULIGHT brings thoughtful, high-performance, and durable lighting solutions for various applications into the HELUKABEL portfolio. These LED luminaires unite the quality of "Made in Germany" with robust construction and the most modern technology—perfectly tuned to the challenges of industrial environments.

AUFMASTER NOW AVAILABLE ON iOS

The innovative Aufmaster cable length measuring device is now available on iOS for Apple devices, making taking measurements on construction sites or taking inventory of remaining lengths possible from your iPhone—save on paper and time.



Summer Fest and VfB Legends Match



With plenty of sun and temperatures just below 30 degrees, the conditions for the HELUKABEL Summer Fest in Hemmingen couldn't have been better. It wasn't just employees and their families that were invited, but the public as well.

As a Club Partner of the VfB Stuttgart, HELUKABEL invited their team of club legends to a friendly match against a selection of our employees. The team of VfB legends included prominent names like Guido Buchwald and Cacau.

The kids had the opportunity to participate in the VfB-Fußballschule (VfB Football School) where around 60 young talents had the chance to be coached through drills by professionals. The

reigning champions from Stuttgart even brought the original DFB-Pokal trophy with them, and visitors couldn't miss an opportunity to get their pictures taken with the cup.

After the game, there was dancing, singing, and celebrating that stretched into the late evening. When it was all said and done, there was one thing everyone agreed on: this was a party that people wouldn't soon forget! ◀



New Automatic Winder in Windsbach

The HELUKABEL production facility in Windsbach has recently put a new automatic winder into operation. This machine handles the rewinding of single cores and thin, multi-core cables from machine spools into rings and coils.

"Thanks to this new technology, we were able to more than double our winding speed and automate the packing process," explains Production Manager Herbert Mehl. "Our employees are no longer required to perform this physically demanding work and can concentrate better on other tasks." With this investment, HELUKABEL is reinforcing its dedication to continual development with the goal of continuously optimising quality, delivery times, and service for our customers. ▶

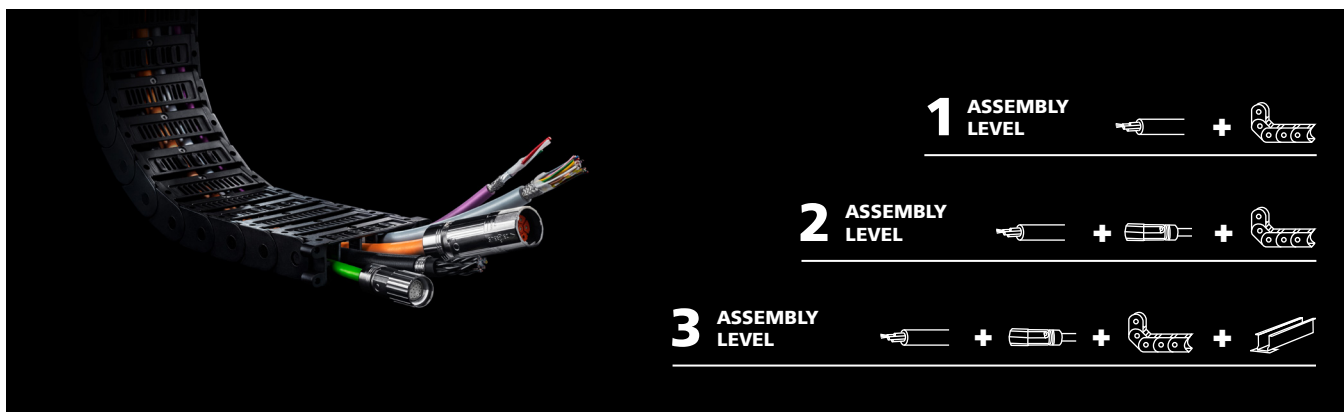
Modular Systems for Moving Applications

HELUKABEL introduces a new, innovative solution to the market: the HELUCHAIN SYSTEM. This new framework was specially designed for applications with linear movements in mechanical and plant engineering, as well as in industrial automation. These modules combine drag chains, highly flexible cables, individual assemblies, and appropriate accessories into perfectly compatible complete systems.

The HELUCHAIN SYSTEM comes in three Assembly Levels which can be flexibly adjusted to fit any application and manufacturing depth. Level 1 includes a base solution consisting of drag chain and cable without assembly—ideal for projects with minimal planning. Level 2 includes additional assembled cables or hydraulic hoses for

quick plug-and-play installations. Lastly, Assembly Level 3 includes a complete, integrated system solution plus accessories such as troughs, floating supports, or mounting brackets, all precisely tuned according to the demands of the application.

What sets HELUKABEL apart? The company produces all of its core components—cables, drag chains, and assemblies—in its own factories. This guarantees that HELUKABEL products maintain a consistently high standard of quality and that each component fits perfectly together. Customers benefit from the simplicity of a single supplier for installation-ready complete solutions and from high operational safety, reduced planning costs, and optimised procurement processes. ◀



Strategic Partnership with Siemens Energy

The globally leading energy technology company Siemens Energy has recognised HELUKABEL as an official Global Strategic Partner. As one of only a handful of partners chosen from hundreds of candidates, HELUKABEL supplies specialty cables for gas-insulated as well as air-insulated switchgears for high, medium, and low voltage and for projects around the world. This specialised application plays an important role in the global transition to sustainable energies.

"This recognition illustrates how much Siemens Energy trusts us when it comes to this critical and challenging application," emphasises Steffen Strecker, Senior Product Specialist Tailormade at HELUKABEL. "Our customer-specific solutions contribute to the safe, intelligent control and reliable operation of systems both

onshore and off," he continues. "The high quality of our products and our extensive manufacturing expertise are a perfect fit for Siemens Energy's global projects, especially in times where energy systems must be efficient, robust, and future-proof," adds HELUKABEL Managing Director Marc Luksch. ◀



Heavy Loads

High Temperatures

Abrasion Resistance



Could it Get Any Hotter?

How HELUKABEL electrical connection technology beats the heat of the steel industry

The steel industry is home to some of the most difficult working conditions on the planet. Red-hot materials, temperatures in the hundreds of degrees Celsius, massive mechanical loads, dust, grime, and aggressive chemicals present enormous challenges for people and technology alike. At the same time, the industry is devel-

oping rapidly—more automation, digitalisation, and sustainability. To ensure that all processes continue to run safely and efficiently, connection solutions are required that are reliable, even in the face of these extreme conditions, and HELUKABEL cables, wires, drag chains, and assemblies make a significant impact.



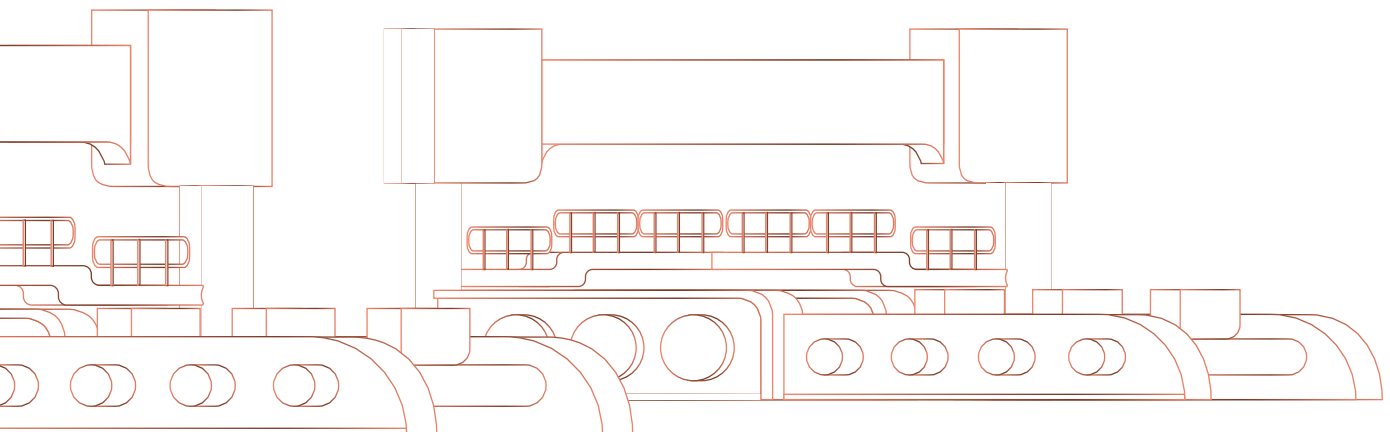
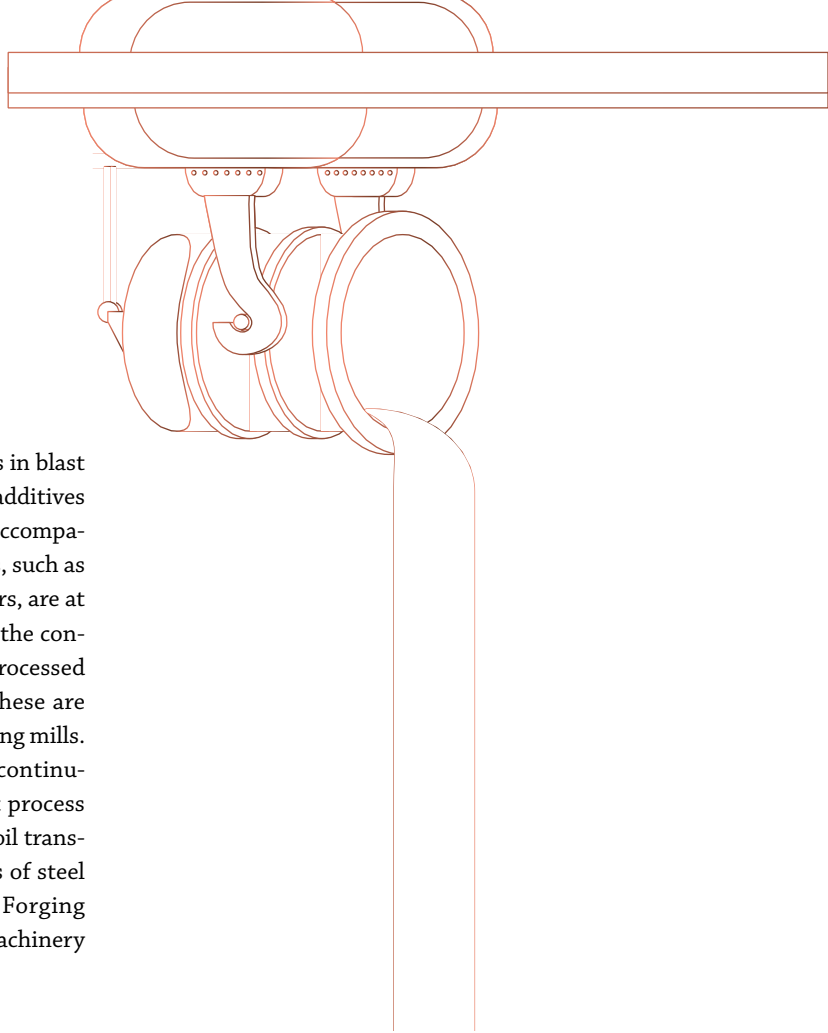
The steel production journey typically begins in blast furnaces where iron ore, coke, and different additives are turned into crude steel. This process is accompanied by extreme temperatures, and machines, such as tapping hole drilling machines or slag scrapers, are at work in critical heat zones. Next, as part of the continuous casting process, the liquid steel is processed into metre-long, massive plates or slabs. These are then rolled into sheets, bands, or coils in rolling mills. Rolling stands ensure that the material is continuously processed as part of a highly dynamic process with heavy weights and vibrations. Special coil transportation systems move and secure the rolls of steel sheets, which can weigh several tonnes. Forging presses and manipulators are also typical machinery used in the steel industry.

EXTREME CONDITIONS ARE STANDARD

"The production environments found in the steel industry are characterised by heat, slag, sparks, dust, and permanent mechanical loads," describes Karsten Göbel, Sales Manager Solutions at HELUKABEL. "Drag chains, cables, and hoses are subjected to extreme conditions in this industry, such as on blast furnace equipment, in steel plants, or in rolling mills. Drag chains must cover long travel distances at times, be resistant to heavy soiling, and endure high speeds with stable rolling dynamics. Extreme temperature changes and corrosive elements should not present any issues." Requirements regarding material quality, construction, and protective mechanisms are appropriately high, as disruptions mean both difficult repairs and expensive production downtimes.

TRENDS: DIGITALISATION, DYNAMISM, AND SUSTAINABILITY

The advancements made by the steel industry heading toward Industry 4.0 mean an increased need for intelligent, sensor-monitored connection technology. Components must be not only high performance, but also low maintenance and long-lasting. Digital monitoring solutions help with the early detection of wear and help to proactively plan maintenance intervals. "All of this means that the electrical equipment of machines and systems will continue to become ever more extensive, which means more cables will be required in installation spaces of the same size, if not smaller," explains Göbel. At the same time, there is





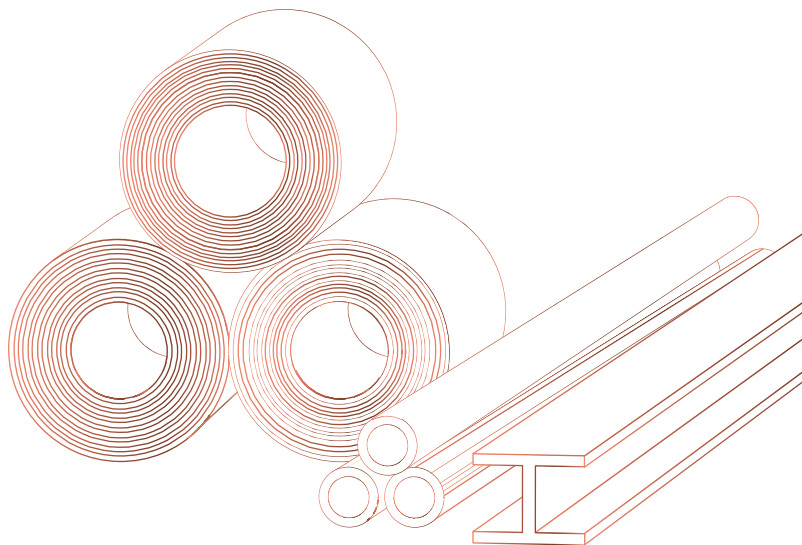
"We don't deliver standard products. Instead, we deliver application-oriented solutions that just work, even under extreme conditions."

*Karsten Göbel,
Sales Manager Solutions,
HELUKABEL*

increasing pressure to improve sustainability—longer life cycles, recyclable materials, and energy-efficient systems are gaining traction. Even plants are becoming more dynamic—quicker rolling, automated coil-handling systems, and high-frequency movements require components with high durability and minimal wear.

HIGHLY DURABLE DRAG CHAINS

HELUKABEL offers products that are specially developed according to the challenges of the steel industry. This includes the robust HELUCHAIN STEEL LINK 4 series drag chains. These four-part chains are available in steel, stainless steel, and hardened steel designs and function with exceptional reliability even at extreme temperatures and under high mechanical loads. "In heavy industry, there's the saying, 'those who know plastics choose steel,'" says Göbel with a grin. "This assumption is now outdated, as, in many industries, plastic drag chains now also have become staple com-

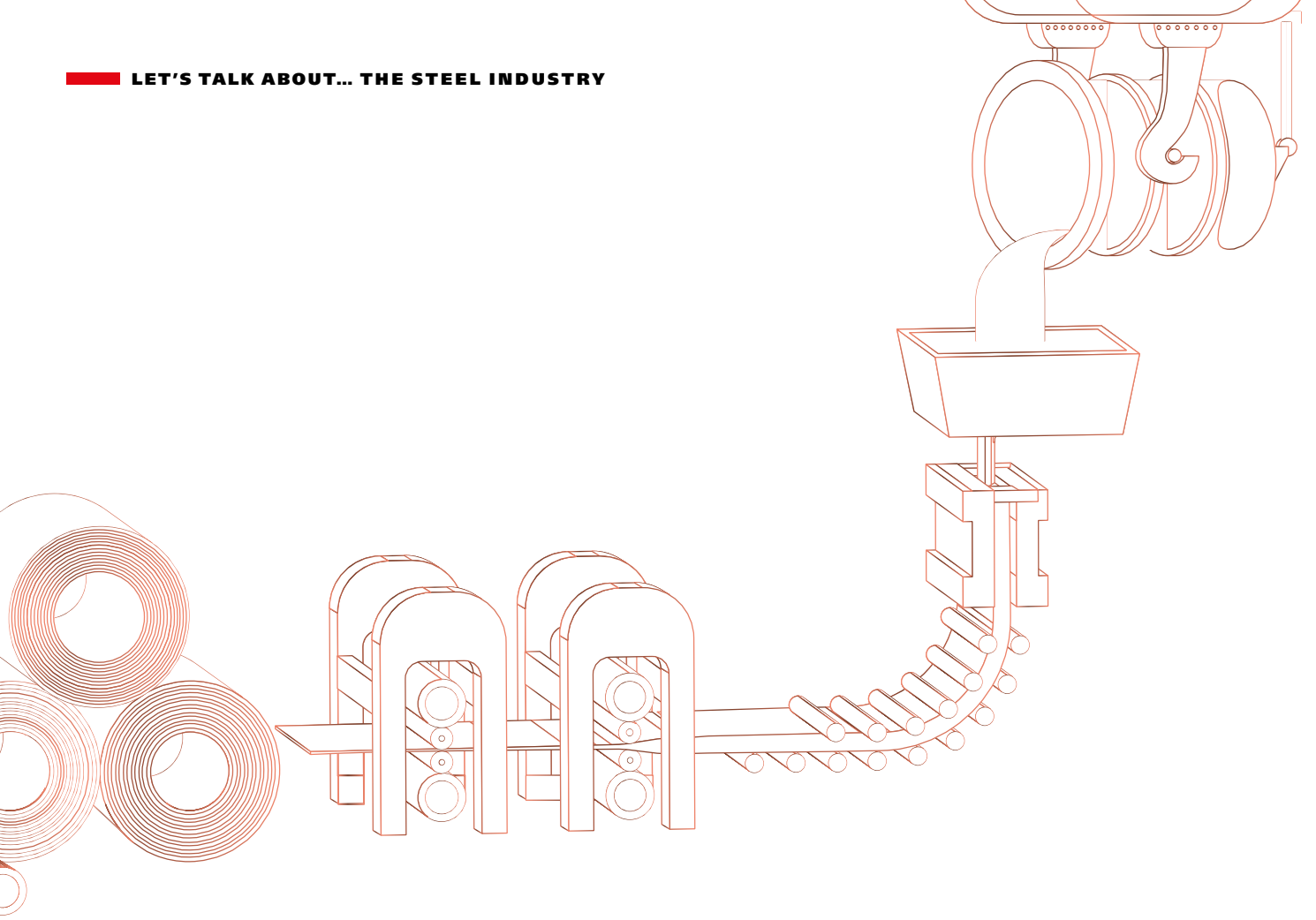


ponents. There are, however, numerous cases where steel drag chains are, without question, a more robust and durable option."

In especially critical applications, drag chain systems such as the HELUCHAIN STEEL LINK 4 GK, with its solid steel segment coverings, are used—for example on tapping hole drilling machines that come in direct contact with glowing-hot slag. Their coverings protect the cables and hoses inside much better than standard, aluminium covers. For environments where dirt and dust play a significant role, HELUKABEL offers drag chains with especially dirt-resistant chain plates.

CABLES FOR EXTREME TEMPERATURES

The demanding operating conditions of the steel industry naturally require special cables. HELUKABEL specifically developed the HELUTHERM 400-MULTI-ES for these conditions. This control and connection cable has an additional, robust, stainless-steel braiding, which protects it from aggressive substances such as casting powder and hydrofluoric acids, as well as provides it with increased mechanical durability. Thanks to its core insulation made of specially heat-treated braided fibre-glass, this high-temperature cable can be used in temperatures up to 400 degrees Celsius, and the HELUTHERM 600-ES can withstand up to 600 degrees Celsius. "On request, we can develop additional customer-specific solutions that are suited for use in temperatures up to 1,200 degrees Celsius," adds Göbel.



HELUKABEL also offers fitting accessories including heat-resistant cable protection conduit systems and cable lugs. "As a systems provider, we even supply pre-assembled cables and wires, as well as complete modules and installation-ready drag chains," Karsten Göbel emphasises. The individual components are perfectly tailored to work with one another and ensure high durability and operational security. "This means users will always find the ideal solution for even the most demanding application."

THE INDUSTRIAL CONNECTIONS OF TOMORROW

The challenges facing electrical connection technology in the steel industry will only become more difficult in the future. Alongside thermal and mechanical loads, topics

such as digitalisation, modularity, and sustainability are making their way back into the spotlight. HELUKABEL is continuously expanding its product portfolio with new materials, intelligent systems, and practical solutions for individual applications.

"We don't deliver standard products. Instead, we deliver application-oriented solutions that just work, even under extreme conditions," Karsten Göbel summarises. "In the steel industry, every hour of operation counts, and our connection technology helps to keep things running." ◀

Robust Energy Transmission for Crane Systems

HKM relies on HELUCHAIN drag chains for moving steel mill applications

Hüttenwerke Krupp Mannesmann GmbH (HKM) is one of the largest, integrated steel mills in Europe. At their location in Duisburg, Germany, the company produces high-quality, raw steel and semi-finished steel products, such as slabs and round billets, for the tube and flat steel industries. Daily operations at HKM rely on the most modern of technologies and decades of experience.

The factory's process chain stretches from their coke plant and blast furnaces—for producing raw iron—to their steelworks. They are able to achieve the quality of steel they require thanks to two converter installations and multiple vacuum systems which remove undesirable gases and other elements from the molten steel. In their slab and round billet plants, the molten steel is cast into the necessary formats for further production. Large-scale crane systems, which transport loads weighing several tonnes, are just part of the scenery. "For operations at our plants, robust and reliable energy and data transmission are essential," explains Kevin Maas, Technician at HKM. "This is a challenge in this type of adverse environment, especially for the moving system components."

Large-scale drag chains carry and protect the cables, wires, and media hoses within from external loads such as temperatures up to 100 degrees Celsius that can fluctuate quickly and severely and, not least of all, fine dust that tends to find its way into even the smallest of recesses. "Connection tech-

nology that normally works perfectly fine in other areas of mechanical and plant engineering is quickly pushed to its limits here," says Karsten Göbel, Sales Manager Solutions at HELUKABEL.

IMPRESSIVE QUALITY AND SERVICE

HKM puts its trust in steel and stainless-steel drag chains from HELUKABEL which are used in the slab plant to move heavy components. "We recently exchanged our drag chains to replace older, failure-prone systems," Maas remembers. "The quality and robustness of the HELUKABEL steel chains impressed us immediately."

The process of exchanging the drag chains was meticulously planned together with HELUKABEL and took place quickly and seamlessly during a large-scale plant shut-

down. "Since then, the systems run smoothly, and the drag chains reliably withstand the immense demands of our plant," Maas emphasises, who, in addition to the exceptional product quality, also positively underscores the service provided by their long-standing partner. "The collaboration with HELUKABEL is always professional, solution focused, and marked by technical expertise. We've been convinced, and we plan to continue working with HELUKABEL on future projects."

Kevin Maas,
Technician at
HKM



GURUTZPE

Large-Scale Machining

Gurutzpe relies on HELUKABEL
pre-assembled cables and drag chains



ABOUT GURUTZPE

The Spanish mechanical engineering company Gurutzpe supplies horizontal turning machines for machining strategic parts in the most demanding industrial sectors. In recent decades, Gurutzpe has delivered more than 6,000 machines worldwide. Today, the company is part of the INZU Group and has approximately 500 employees—more than 70 of whom work in the lathe division.

Learn more at gurutzpe.com

The Spanish mechanical and electrical engineers at Gurutzpe rely on custom cables and drag chains from HELUKABEL for their large-scale CNC lathes. The result? Significantly reduced installation times, error-free setup, and the highest reliability worldwide.

When it comes to high-precision machining of large parts, customers trust Gurutzpe. Founded in 1955 in the Basque city of Deba, the company specialises in the development and manufacture of large-scale CNC lathes. Its customers come from diverse sectors, including steel and energy production, shipbuilding and railways, aeronautics and astronautics, and the paper and pulp industry.



For more than three decades, Gurutzpe has relied on the expertise of Urkunde, the Spanish subsidiary of HELUKABEL.

The huge CNC lathes are dismantled into individual modules for transport and reassembled at their destination.



Ninety-five percent of Gurutzpe's production is destined for international clients in countries such as the United States, China, Germany, and France. "Wherever maximum precision and reliability are required in the machining of large and heavy parts, you will find our machines," proudly states Joaquín Orbegoza, Director of Electrical Engineering.

DESIGNED FOR TRANSPORT

Gurutzpe CNC lathes are complex systems with intricate automation systems that must be connected to a central control system. Due to their size, they are disassembled into their individual components for transport and reassembled at their destination. This means that all electrical connections must be designed to be able to be disconnected and reconnected quickly and safely.

"For machines with travels of up to 20 metres and environments where oil, metal chips, or other loads are encountered daily, we need robust, flexible, and standardised solutions," says Mechanical Designer Andoni Elosua. Drag chains are a fundamental component in protecting cables that are constantly moving and subjected to

mechanical loads such as bending, tension, and abrasion.

TAILOR-MADE SOLUTIONS FROM A SINGLE SOURCE

For more than three decades, Gurutzpe has relied on the expertise of Urkunde, the Spanish subsidiary of HELUKABEL. This collaboration grew from the supply of electrical cables and wiring into a partnership, and today, Urkunde offers complex, pre-assembled drag chain solutions, precisely tailored to the needs of each machine.

For their current project, they are using closed hybrid and steel drag chains from the HELUKABEL HELUCHAIN HYBRID LINK 4-PL and HELUCHAIN STEEL LINK 4-SL ranges. Even in harsh environments, they are strong, durable, and reliable, protecting the internal cables from external influences such as dust and chips. Their stability even prevents the cables from being

crushed or kinked during movement, improving operational safety and minimising the need for maintenance.

Inside the drag chains, you will find the TOPSERV 109 PUR servo motor cable, de-

signed to reliably transmit power to and from servo motors. These highly flexible cables are oil resistant and ideal for the continuous motion of machine tools. The HELUCHAIN MULTISPEED 522-TPE UL/CSA control and connection cable was also specifically developed for the highly dynamic movements of drag chains. It ensures reliable power transmission over long distances, even with rapid accelerations.

To ensure precise signal transmission, the TOPGEBER 512 PUR cable features a polyurethane sheath that offers high mechanical resilience and resistance to oils, coolants, and lubricants, which are decisive advantages in harsh industrial environments. PROFINET cables manage industrial communication between control systems and peripherals and are designed for reliable, real-time, and interference-free data transmission over long distances.

These modules are delivered pre-assembled, so the only step left after delivery is to connect them. "This not only saves us valuable time, but also prevents wiring errors and improves the traceability of our facilities," explains Mr. Orbegoza.

IMPROVING INSTALLATION EFFICIENCY

Thanks to these pre-assembled drag chains, installation times at Gurutzpe have been reduced by approximately 40 per cent. The straightforward construction and clear labelling of all connections have significantly improved the traceability of wiring. Having an impressive start-up error rate of zero is an important factor for upholding tight delivery deadlines. "Especially for complex projects such as this, our success relies on being able to closely collaborate with HELUKABEL," says Mr. Orbegoza. ◀

"Especially for complex projects such as this, our success relies on being able to closely collaborate with HELUKABEL."

*Joaquín Orbegoza,
Director of Electrical Engineering,
Gurutzpe*

"I Discovered My Strengths"

Career launch successful: Tatiana Nogueira successfully completed her training as an industrial business management assistant and is, as of recent, working as a recruiter in our human resources department. Tatiana has provided us with an exciting glimpse into her journey and daily life as a HELUKABEL Youngster.



Beginning my journey at HELUKABEL:

I had just ended a training program at another company early because the working atmosphere just wasn't right for me. In the first interview with HELUKABEL, I could tell that the atmosphere here was much more relaxed and relationships much more genuine. And I was accepted for the training position that very evening. To bridge the gap between then and the beginning of the program, I was able to start working as a temporary assistant in purchasing and product management.



My tasks:

I was able to experience many departments—sales, logistics, marketing—all with distinctly different assignments. It was exactly as I had envisioned it, and I discovered what my strengths are. In the human resources department, I realised that I had found my calling! There, I was provided with plenty of support and encouragement, and I soon took over some responsibilities.



A highlight from my time as a Youngster:

There were many, but particularly the team spirit and the joint activities with the HELUKABEL Youngsters—laser tag, visiting an amusement park, baking cookies.



My next steps:

Following my final exam, I was brought in as a recruiter in the human resources department. I was overjoyed to be offered this opportunity, because I knew that here, I was more than just another face; I was someone who was seen and valued.



My advice for other Youngsters:

It's important to get involved in as many new things as possible, and to not be shy. Don't be afraid of making mistakes—learn from them. As a trainee, it's completely normal to not know everything. It's better to ask the same question five times than not at all!

A BEHIND-THE-SCENES PEEK!

Follow the HELUKABEL Youngsters on Instagram and TikTok:



Instagram



TikTok

Taking to the Skies—When the Job Demands It

Light-weight and stable HELUCHAIN drag chains bring RUTHMANN aerial work platforms to life

Made for use at dizzying heights, mobile aerial work platforms carry people to places that would normally not be accessible. A reliable power supply for the controls and hydraulics of these machines is essential. To overcome challenges such as ever-increasing distances and tight working spaces, the market leader RUTHMANN depends on robust, high-performance, installation-ready, and pre-assembled drag chain assemblies from HELUKABEL.

Whether for maintaining gigantic wind turbines, precise tree pruning above narrow city streets, or cleaning the facades of high-rises, RUTHMANN aerial work platforms are in demand for challenging jobs. Jobs that take people places where they otherwise couldn't reach—high up in the air or above deep holes. To ensure that everything runs smoothly and reliably, these mobile machines must be constructed by experts according to strict quality standards, down to the smallest detail.

In this challenging sector, RUTHMANN is one of the most successful and innovative suppliers on the market, and they are able to

draw upon a wealth of experience. Founded in 1901, the company is located in the city of Gescher-Hochmoor in the German state of North Rhine-Westphalia. RUTHMANN developed their first aerial work platforms in 1954 under the brand name STEIGER, a popular name which is still in use today. Since 2021, they have been part of the globally active TIME Manufacturing Company, which is an international group of work platform manufacturers with approximately 2,500 employees. Alongside RUTHMANN, brands such as VERSALIFT, France Elévateur, and MOVEX are also members.

ALWAYS IN NEED OF MORE HEIGHT AND REACH

STEIGER machines are one of RUTHMANN's top sellers and, in many places, the name is synonymous with lorry-mounted aerial work platforms. In developing the product family, new milestones have been achieved that push the boundaries of what is possible. "Our largest machines currently reach working heights of up to 100 metres and have a reach of more than 40 metres," explains Engineer Nico Wessels. These giant machines were used, for instance, in the 2019 restoration of the fire-damaged



STEIGER lorry-mounted aerial work platforms are the German manufacturer RUTHMANN's flagship product.

Notre-Dame Cathedral in Paris. "We even regularly outfit our smaller models with new innovations to further improve their functionality and versatility."

The majority of STEIGER models produced in Gescher-Hochmoor are compact with working heights up to 30 metres. The work platforms are then mounted onto the bed of a 3.5 or 7.5 tonne lorry. Their customers include municipalities, construction and commercial enterprises, electric utilities, and commercial machine rental companies. "Every STEIGER has a steerable work basket that can be precisely controlled using a hydraulic-powered, telescoping boom system," says Wessels. The stable and failure-proof supply of electrical and hydraulic energy is vital, as users, especially those at great heights, depend on the reliability of the work platform.

PROTECTION AGAINST MECHANICAL INFLUENCES

The electrical control cables and hydraulic hoses are hidden inside the hollow, steel profile of the boom and feed into the work basket. To protect them from mechanical loads such as abrasion, bending, pinching, or kinking, they are securely housed within drag chains which guide the sensitive components through each movement of the boom and prevent damage that may lead to expensive downtimes or even safety risks. "We have relied on HELUKABEL for these critical assemblies for many years," reports Wessels. The specialists in electrical connection technology supply RUTHMANN with custom, installation-ready drag chains that are pre-filled with the required cables and hoses.

The requirements for these drag chains are high: maximum stability at the lowest weight possible. "We construct our boom systems to be as light as possible to achieve better performance," explains Wessels. "Of course, the energy supply also plays a role." Due to the limited assembly space, these drag chains must contend with tight bend-

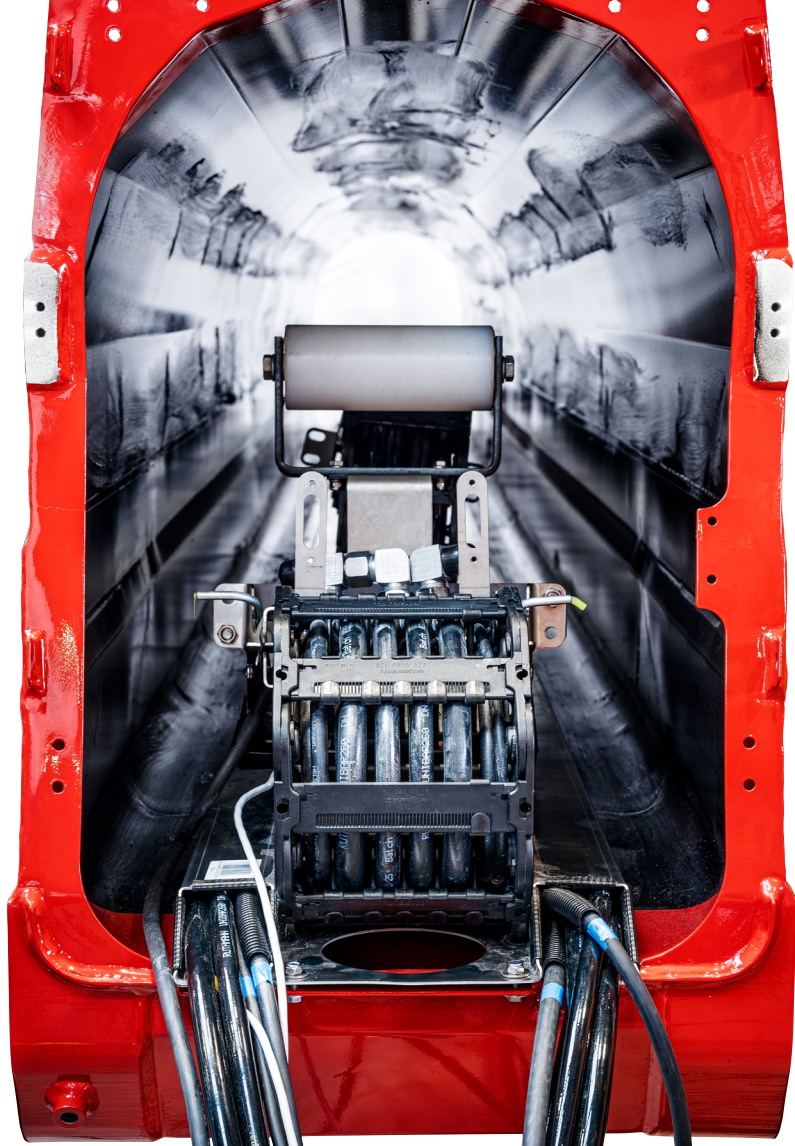
ing radii over self-supported distances spanning multiple metres. They must also be able to easily handle temperatures ranging from -20 to +50 degrees Celsius, as they are found in STEIGER machines sold around the globe and are therefore used in both bitter cold and tropical heat.

OPTIMISING FOR STABILITY AND WEIGHT

For this demanding application, HELUKABEL supplies their tailor-made HELUCHAIN PLASTIC LINK 4-PK. This positive-interlocking, plastic drag chain proves its mettle with its wide spectrum of applications and is suited for not just long travel distances and high speeds, but also for long, self-supported distances and tight bending radii. Crossbars in each bracket improve the chain's lateral stability and provide improved guidance for cables with smaller diameters. "The chain provides an

exceptional stability-to-weight ratio, making it perfect for this application," emphasises Helmut Grzybowski, Sales Manager Solutions at HELUKABEL and long-time contact partner for RUTHMANN.

The cables installed in the drag chains have an oil-resistant, PUR outer sheath and are UL/CSA certified, which means RUTHMANN doesn't need to worry about whether a machine is being constructed for use in the EU or overseas. The complete system is delivered pre-assembled and only needs to be attached and connected to the boom system, saving valuable time. "When we make repairs or service machines, instead of replacing individual cables or hoses, we exchange the entire module," Engineer Wessels adds. "It's simpler, more efficient, and allows our customers to be back up and running sooner." Due in large part to the hydraulic



The electrical control cables and hydraulic hoses are located on the inside of the hollow boom shaft.

hoses used, exchanging the modules is a preventative measure, and actual damage rarely occurs.

SKY-HIGH SUPPLIER PERFORMANCE

HELUKABEL has also impressed the the decision makers at RUTHMANN with their reliability. "Their supplier performance is demonstrably consistent and top quality, going above and beyond," praises Purchaser Christoph Dierker. The products they need are typically available on short notice and on time. "And if we ever need something new—for improving one of our models for instance—communication with HELUKABEL is always constructive and uncomplicated," adds Nico Wessels. "We are happy to have such a competent partner on our side, who provides us with comprehensive support for all matters dealing with energy supply."

**"Communication with
HELUKABEL is always
constructive and
uncomplicated."**

*Nico Wessels,
Engineer,
RUTHMANN*

In applications thus far, the HELUCHAIN drag chains have proven themselves, and this valuable experience is being directly applied toward the continual optimisation of the overall system. This is just one of the reasons why RUTHMANN is eager to continue this efficient collaboration in the future. "We know we can rely on the quality and service that HELUKABEL provides," Wessels emphasises. "And, ultimately, we're not the only ones who benefit—our customers do, too."

ABOUT RUTHMANN

RUTHMANN Holdings GmbH is an international aerial work platform manufacturer. Founded in 1901, the company is especially known for their brand STEIGER, and is globally recognised as a technology leader in their industry.

Learn more at ruthmann.de

Successful team: (from right) Purchaser Christoph Dierker and Engineer Nico Wessels from RUTHMANN with Area Sales Manager Thomas Thomae and Sales Manager Solutions Helmut Grzybowski from HELUKABEL.



HIGH-TECH CABLES FOR LIGHT-WEIGHT YACHTS

The SAY 52, one of the shipbuilder SAY Carbon Yachts' crowning jewels, glides elegantly and weightlessly across the deep-blue waters off the coast of Ibiza. This is thanks to its high-tech, carbon-fibre hull. This special, light-weight construction makes the yacht almost 50% lighter than comparable models, making it not just more dynamic and agile—it also uses less fuel resulting in fewer emissions.

Optimal comfort for drivers and passengers alike is ensured thanks to the extensive electrical wiring of its amenities. For this, SAY Carbon Yachts uses the halogen-free control and connection cable HELUTHERM 145 MULTI, which, with its DNV approval, is perfect for marine and offshore applications thanks to its cross-linked insulation and sheath materials that make it especially resistant to temperature and oil, as well as flame retardant.



Ambitious, but Down to Earth

Business development and professional football... What do these have in common?

More than you would think! For both, integration, team spirit, and the drive to constantly improve are decisive factors for sustainable success. We spoke with two

leaders with vastly different perspectives on this topic:

Marc Luksch, Managing Director of the HELUKABEL Group, and Cacau, former member of VfB Stuttgart and the German national team.



What is the difference between a group and a proper team?

Cacau: When you're a member of a team, your goal is to be successful and to win. You won't always be successful, but this is what makes the difference. In my time on the pitch, I learned that a real team fights for one another, and each member is ready to give it all. Every now and then, we may have had a tiff, but we always had the same goal, and in the end, it often paid off.

Marc Luksch: It's the same for a company as with a football team. Each person has a position, and when all of the cogs are spinning in sync, that's when the team achieves success and comes out on top.

What does it take to keep a team motivated and successful over the long term?

Cacau: You can't rest on your laurels. As soon as the game ends, you start preparing for the next. And if you want to stay ahead, you need to always be prepared to step out of your comfort zone.

Luksch: Cohesion between departments, and even between countries, forms the foundation for this. Internationally, HELUKABEL is represented in 40 countries, and, just in our headquarters in Hemmingen alone, we have employees from over 30 countries. This is why it's important to create trust and set shared goals.

"It's the same for a company as with a football team. When all of the cogs are spinning in sync, that's when the team achieves success."

*Marc Luksch,
Managing Director,
HELUKABEL*

Describe a special moment that was important for you in terms of team building.

Cacau: In 2007, we were the champions of the German Bundesliga. A week later, we lost the cup final due in part to an individual mistake on my behalf. Success and failure in such a short timeframe. This experience showed me how important inner balance and a sense of unity with your team are.

Luksch: For me, this year's cup final between Stuttgart and Bielefeld stood out. Colleagues from both locations sat together in the stadium, decked out in their team's colours. The excitement and solidarity show that we're becoming a real team.

When it comes to team spirit or cohesion, what advice do you have for young talents, whether in sports or in business?

Cacau: Be ambitious but stay down to earth. Always do your best, not because you always need to be the best, but because your dedication carries the team forward.

Luksch: Trust your ability to take on responsibility. We can only achieve success when we work as a team, and that's why the possibilities at HELUKABEL are endless for those who are curious and get involved. ◀



Watch the complete interview with Marc Luksch and Cacau on our YouTube channel!

THE TWO MAKING MOVES

Marc Luksch has been the Managing Director of the HELUKABEL Group since 2014. Son of the company's founders, Helmut and Heidi Luksch, he grew up with the family business and is now the second generation to helm the ship.

Cacau is a former professional football player and has been a brand ambassador for the VfB Stuttgart since 2022. Born in Brazil, he has been a German citizen since 2009, won the German championship with the VfB Stuttgart in 2007, and played in 23 matches for the German national team.



© Mirko Hertel, BHS Corrugated

On the Same Wavelength

Tailor-made connection solutions for corrugators
from BHS Corrugated

When manufacturing complex production systems for corrugated paper, BHS Corrugated places great emphasis on automation and modularity. Reliable connection solutions for drive systems, as well as control and switch cabinet systems, are permanent fixtures. With a comprehensive range of products, global availability, and technical expertise, HELUKABEL supports the mechanical and systems engineers at BHS Corrugated in realising their projects on a global scale.

Whether shipping cartons, packaging solutions, or displays, corrugated board has become inseparable from modern logistics and global consumerism. What seems simple at first glance is, in reality, a complex, high-tech product—light, stable, recyclable, and still highly customisable. In order to keep up with the steadily increasing demand for the material, corrugated board manufacturers require the most modern machine and system technology available.

BHS Corrugated Maschinen- und Anlagenbau GmbH knows this all too well. The company's story begins in the year 1717 in the Bavarian town of Weiherhammer with the founding of an ironworks. The current BHS Corrugated added corrugators to their portfolio in 1960. Since then, they have developed into a global solutions leader for the corrugated board industry. Today, the company employs more than 3,500 employees in 20 countries and achieved €827 million in turnover in 2024.

The BHS Corrugated portfolio includes complete corrugators, machines, systems, and Industry 4.0 solutions, as well as logistics concepts and printing technology. Their gigantic production systems, which are used in the production of corrugated board, can be up to 200 metres long. This is why they are constructed modularly. The individual components of the system are assembled at

different company facilities and then transported to their customer's location by lorry or sea freight. Then, the final assembly and setup of the complete corrugator line take place on site.

TECHNICAL DIVERSITY AND GLOBAL REQUIREMENTS

Electrical connection technology is an indispensable component of BHS Corrugated's highly automated machinery. In drive and control technology, as well as in control cabinet construction, many different types of cables and wires are used. HELUKABEL has been a trusted and proven systems supplier for BHS Corrugated for decades thanks to a product portfolio that can be relied upon to cover any and all needs, regardless of application.

They deliver control and connection cables such as the versatile JZ-500, flexible TRONIC-CY data cables, TOPSERV servo cables, or TOPFLEX motor cables. For control cabinet wiring, single cores from the FIVENORM product range are used. These cables are approved according to five different standards and are therefore suited for international use. "This is an important criterion for us as we export many of our corrugators to the USA, China, or other markets," explains Markus Schrödl, Electrical Engineering Specialist at BHS Corrugated. "Global approvals are often strictly required for the components that we use." Even for automated processing and printing with a Komax machine, as is the case with BHS Corrugated, the FIVENORM single cores are a perfect match.

DELIVERED DIRECT, READY TO CONNECT

BHS Corrugated obtains the cables required for installing individual system modules in Weiherhammer primarily from a prefabricator located nearby. They not only prepare cables in the desired length and with the

appropriate connectors, but that are also pre-sorted on specifically designed installation carts that can be directly placed at each of the different stations of the production line. "Our employees only need to take one cable at a time and install it in the correct place in the machine. This saves a lot of time and effort," says Schrödl. Other tailor-made products required for the final installation at the customer's location are delivered with the machine.

For the experts at BHS Corrugated, the international availability of HELUKABEL products is another bonus. With 76 locations around the globe, the company can ensure that replacement parts are always at hand when needed. "For a supplier like BHS Corrugated, who services systems worldwide, this is a real competi-

tive advantage," asserts Thomas Puchta, Area Sales Manager at HELUKABEL, who is BHS Corrugated's first point of contact.

"The uncomplicated and open communication with the HELUKABEL sales team has really shaped our collaboration and allowed it to continuously develop."

*Markus Schrödl,
Electrical Engineering Specialist,
BHS Corrugated*

Markus Schrödl also praises their friendly advice and technical expertise: "The uncomplicated and open communication with the HELUKABEL sales team has really shaped our collaboration and allowed it to continuously develop." Even their colleagues in their offices are easy to reach for questions and are eager to provide a quick and satisfactory solution. The detailed, yet clear, technical documentation on the website also plays its part in letting the leadership at BHS Corrugated know that they are in good hands with HELUKABEL.

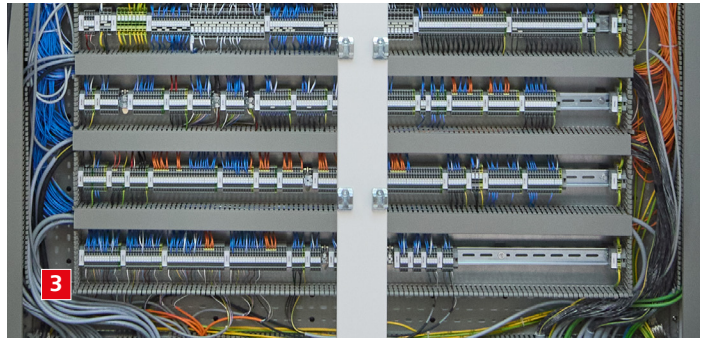
DECLARED A PREFERRED SUPPLIER

In July 2025, the systems engineers made their appreciation known in a spectacular way by declaring HELUKABEL a preferred supplier of BHS Corrugated. Christian



Schneider, Group COO, personally travelled to Hemmingen to deliver the news. "We are very pleased with this distinction as it is proof of the trustworthy and cooperative collaboration between BHS Corrugated and us," explains Thomas Puchta.

Today, roughly 95% of all cables installed by BHS Corrugated come from HELUKABEL, and further projects are already being planned. "Our companies share the same goal of setting standards through quality and innovation, all while developing solutions together that meet the demands of the future," emphasises Markus Schrödl. "This is why connection technology from HELUKABEL is and will remain a key component of our machines and systems." ◀



- 1** The gigantic corrugated paper systems from BHS Corrugated can be up to 200 metres long.
- 2** The cables are cut to length, the appropriate plugs are attached, and they are delivered for installation pre-sorted.
- 3** When building control cabinets, many different cables and wires are used.
- 4** Markus Schrödl (r.), Electrical Technology Specialist at BHS Corrugated, and Thomas Puchta, Area Sales Manager at HELUKABEL.



ABOUT BHS CORRUGATED

BHS Corrugated Maschinen- und Anlagenbau GmbH is a leading solutions supplier in the corrugated paper industry. With more than 3,500 employees at their headquarters in Weiherhammer, Germany, as well as in more than 20 countries around the globe, the entire range of services offered by this lifecycle partner is impressive. This includes the corrugated paper machines, plants, and factories, Industry 4.0, logistics, and single-pass inkjet digital printing. Customers receive comprehensive solutions ranging from development and production to installation and maintenance service.

Learn more at bhs-world.com





Combining Proven Solutions with New Ideas

For almost a year, Marcel Olivier has been the Plant Manager of HELU Connectivity Solutions Haan GmbH, the specialists in drag chains and drag chain systems within the HELUKABEL Group. In this interview, he tells us what his vision and goals are for the company, what changes came as part of its integration into the Group, what are yet to come, and what excites him about working with so many different people every day.

Mr. Olivier, you've worked with HELU Connectivity Solutions Haan for two years and have since become Plant Manager. How did you originally find your way to the company?

That's actually a funny story. I completed my doctorate in Aachen in manufacturing technology and, while I was finishing my dissertation, I was registered as unemployed for three months. I actually wanted to travel after completing my dissertation—enjoy a break—but things just didn't work out that way. A head-hunter wrote to me saying that they thought my profile fit perfectly with a small company near Dusseldorf, known at the time as EKD Systems. Since we were already in the process of moving to Dusseldorf, I drove there and spoke with the leadership at that time for almost three hours. By then, HELUKABEL had already acquired the company,

and the vision of building something new together really excited me. I joined EKD as a Project Engineer. During the process of restructuring the company into HELU Connectivity Solutions Haan, the newly created position of Plant Manager was offered to me. For me, this was a real honour and challenge that I gladly accepted.

What about the development and production of drag chains fascinates you personally?

I find it very interesting that a product, that is typically a background player, actually fulfils such an important role. This mirrors my personality a bit. I don't particularly enjoy being in the spotlight and prefer to let my performance speak for itself. In many applications, drag chains perform an enormously important role, and there are many complex parts and factors

that must be perfectly tuned to one another. We're talking about tolerances in the tenths, hundredths, or even thousandths of millimetres. And when everything fits, customers can expect our drag chains to withstand millions of movement cycles without complaint. I find this very impressive.

What tasks or challenges are part of your daily work life as Plant Manager in Erkrath?

I lead our employees in many different areas. It's important to connect with each and every individual, as every person is different in their way of working, or even in how they communicate. In addition to that, I need to make many decisions that affect not only our goals here, but also those of the entire HELUKABEL Group. That's why I make sure that the direction we're heading will allow us to be successful.



HELU Connectivity Solutions was previously named EKD Systems, and before that, EKD Gelenkrohr, a company with around 50 years of history. What has changed as part of its integration into the HELUKABEL Group?

The name change has us feeling more strongly like we're a member of the Group. And we identify with it even more so, now. For some of our older colleagues, the integration was a significant change. To make it a success, it meant that many goals and channels had to change. Now, our employees understand our direction as a group very well, especially the solutions mindset, meaning that we want to provide our customers with installation-ready, complete solutions.

What advantages does this closer interconnectivity with HELUKABEL have for your customers?

The biggest advantage for our customers is that installation-ready system solutions are now available to them. Of course, even before, we would suggest appropriate cables when delivering a drag chain. But now that we have our entire gambit of competencies under one roof, we can more precisely and efficiently produce optimal solutions for our customers. Furthermore, as part of the Group, we can develop new products that are better tailored to the requirements of our customers, thereby expanding our portfolio.

Drag chains play a central role in many industrial applications. In what areas do you currently see the most potential?

Generally speaking, the current market situation isn't so simple. We do, however, see great potential in many industries, for example in the manufacturing of tooling machines, handling technology, and intralogistics—applications such as high-bay warehouses or pick-and-place systems. All of these industries require increasingly dynamic movements and higher travel speeds. For our products, we're seeing these as promising growing markets.

What are your vision and goals for HELU Connectivity Solutions Haan in the coming years?

My goal is for our location to become the benchmark within the Group. We want to overcome our challenges in a way that other Group companies can use as inspiration, and we want to be able to support

them, too. To achieve this, I would like to get us to a place where we have all of our processes perfectly under control, and always following the standard of working together with the Group to provide our customers with perfect solutions.

Are there any innovations or investments that customers especially can look forward to?

At the beginning of 2025, we unveiled our new drag chain, the HELUCHAIN PLASTIC LINK 4-45. This drag chain is specially designed for demanding industrial applications, and its impressive features include its ease of installation, exceptionally quiet operation, and its suitability for a wide range of applications. And this is just a taste of what's to come. We have a number of ideas, including this drag chain, that are sure to cause a stir in the market soon. Of that, I'm sure.

What do you enjoy the most about your work?

Easy, the people. We have a fantastic team, and every member wants to make a difference, which is surprisingly a lot of fun. We are able to create and affect so much, and in so many industries. We orient ourselves according to our customers' needs, as well as future needs, by combining proven solutions with new ideas. This continues to inspire me, day after day.

In your opinion, what are the most important qualities to have when in a leadership role?

For me, the most important thing is to respect and value people. This means trying to understand why someone acts the way they do, that you actively ask questions, and exchange ideas. I aspire to lead our em-

ployees by supporting and challenging them in order to get the best out of each and every one of them. As a leader, you need to also provide consistency and always be authentic, because your employees will immediately notice if you're not being genuine. If you can't be authentic in your role, then you're not the right leader for the job.

If you were to have a motto for your day-to-day work, what would it be?

"We've got this," he said. (In German: "wir kriegen es auf die Kette"—a phrase that evokes the image of getting things aligned or running smoothly, like links in a chain.) ◀

"Customers can expect our drag chains to withstand millions of movement cycles without complaint. I find this very impressive."

PUTTING MARCEL OLIVIER ON THE SPOT!

Tea or coffee?

→ Easy, coffee. I especially like the smell.

Suit or jeans?

→ Also easy, jeans. They're more comfortable.

Early bird or night owl?

→ Normally, I'm an early riser, but I can also stay up late if need be.

Do you cook at home or go out to eat?

→ I really enjoy good food and cooking together with others, but I enjoy going out to eat even more.

Do you prefer playing sports or watching them?

→ I very much prefer to play myself. Just watching doesn't do it for me. I like to go jogging to clear my head. My wife and I also recently started playing paddle tennis with friends—it's a lot of fun.

Summer or winter?

→ I like just about everything about summer, except the temperatures. It quickly gets too warm for me. I guess what I mean to say is that I prefer winter temperatures better.

Go camping or stay in a resort?

→ I prefer to go camping, but my wife prefers resorts. So, we mostly meet in the middle and take trips to the city, for instance.

Dogs or cats?

→ Easy, dogs. As a child, we had several dogs, and I've been a dog person ever since.

Music or podcasts?

→ Music. My mother always listened to music from the 50s. I grew up with Elvis Presley. Currently, old-school hip-hop is my favourite.

City or village?

→ Large cities. Villages are too boring for me.

TV series or books?

→ Series. Breaking Bad or How I Met Your Mother. I was addicted to these during my studies.

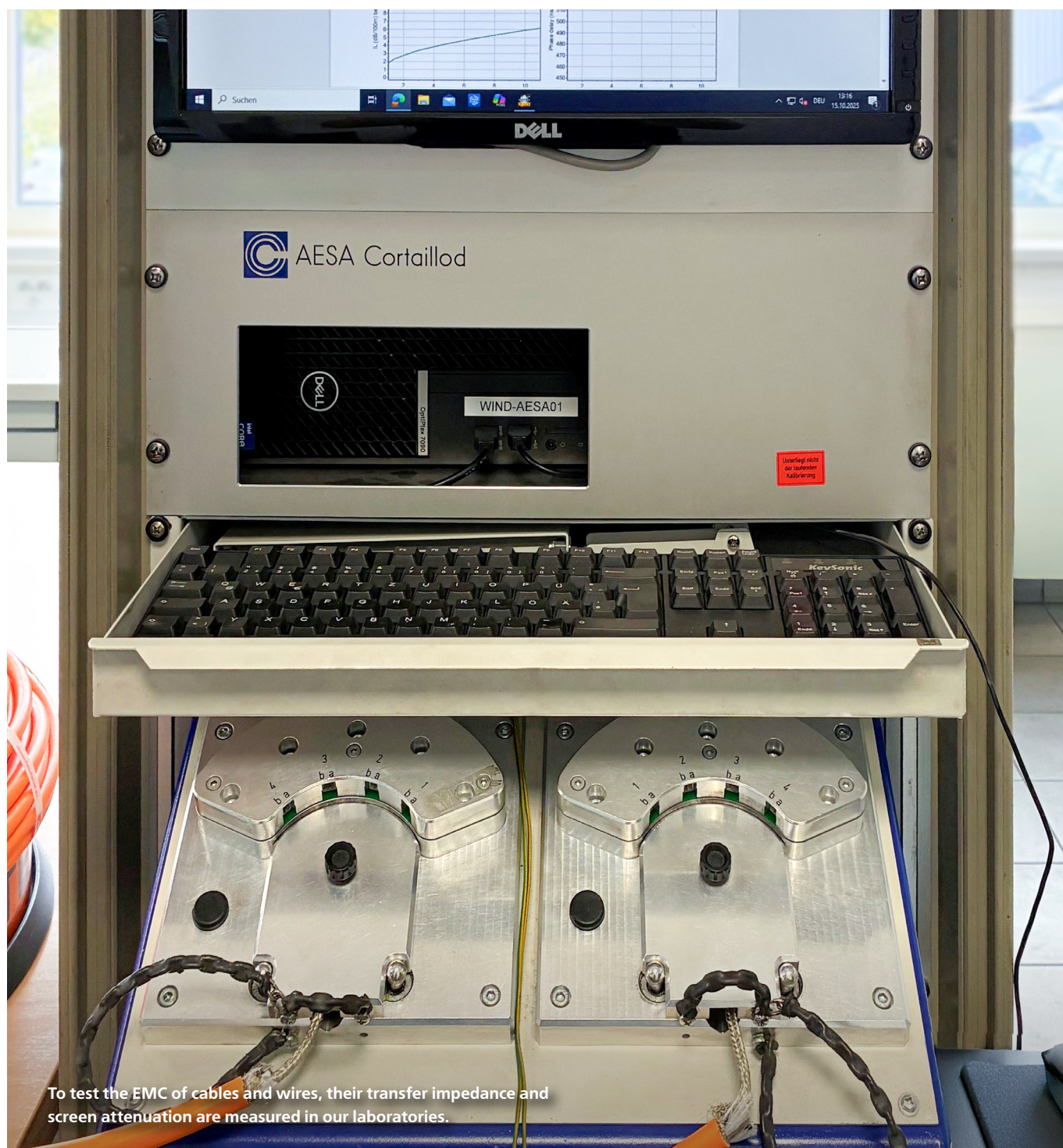


THE SERIES AT A GLANCE:

TORSION TESTS // BENDING TESTS // DRAG CHAIN TESTS // KINK AND ABRASION TESTS //
FIRE TESTS // AGEING TESTS // **EMC TESTS**

EMC Tests

When developing our cables and wires, every product is extensively tested in our testing laboratories. In this seventh, and final, part of our series "Put to the Ultimate Test", we will explain our EMC testing process.



Electromagnetic compatibility (EMC) describes an electrical system's ability to function reliably in an environment with electromagnetic disturbances without, itself, disrupting other devices or components. Cables and wires are not just passive transmitters of signals and energy; they may also be the source of or be functionally impaired by disruptions. EMC disruptions occur quite often in industrial applications where frequency converters, motors, or control systems are in use.

This makes EMC therefore an important marker for quality in connection technology. After all, users want to be certain that the cables they're using won't turn out to be the weak link. The use of effective screening is paramount, and HELUKABEL tests these in their highly modern, in-house testing centre. Two properties are focused on in testing: the transfer impedance and the screening attenuation.

Transfer impedance indicates how well a screen shields the internal conductor against high-frequency interference currents. It is measured in milliohm per metre ($m\Omega/m$), where lower values indicate better screen performance. On the other hand, screening attenuation refers to the strength of external electromagnetic fields that the cable can shield against. This is measured in decibels (dB), and the higher the value, the better.

HELUKABEL tests the transfer impedance according to EN 50289-1-6 and IEC 62153-4-3 using a triaxial method. This involves a standardised interference current being fed into the screen, during which the voltage on the inner conductor is measured. This allows the strength of the external field's influence on the interior of the cable to be precisely measured. Screening attenuation is essentially measured in reverse. A specified, high-frequency test signal is applied to the cable, and the externally radiated signal is measured using a test instrument. The better the relationship between the signal being introduced and the signal being radiated, the more effective the screening.

Both values are heavily dependant on the construction of the cable, especially the type of braid, the degree of coverage, and the material quality. This is why it's important to consult an expert when choosing cables and wires—especially for EMC-critical applications. Cables constructed according to customer-specific requirements can also help to safely and reliably overcome specific challenges related to electromagnetic compatibility. ◀

Ask the Expert

What is the most common mistake made with regard to EMC when planning cables?

One common mistake is not paying enough attention to the earthing and screening in a system. Often, a high-quality, screened cable is used, but then not correctly earthed, which renders the advantages provided by EMC null and void. The mixing of signal and power paths combined with improper cable installation near sources of interference are frequent causes of EMC-related problems. It's essential to plan holistically.

Full screening or braided screening—which is better?

Full screening (a screen with a solid surface) provides the best protection against very high frequencies as the transfer impedance is effectively zero. For moving applications, however, these cannot be used, as they're completely inflexible and break easily under bending loads. It is for this reason that this type of screening is only found in permanently installed antenna cables. In industrial applications, a well-designed, braided screen typically suffices. The most important attributes are the angle of the braid, the degree of coverage, and the quality of the material. In our experience, "more" is not the answer, but rather the synergy between screen parameters.

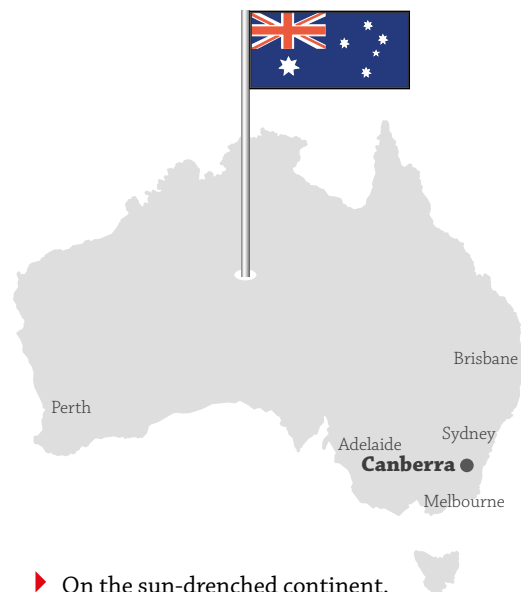


ABOUT THE EXPERT

Ömer Durak is the Head of Cable Construction at the HELUKABEL production facility in Windsbach

Welcome to Australia!

Interesting facts about the HELUKABEL subsidiary and the country



- ▶ HELUKABEL Australia is currently the newest member of the global HELUKABEL family. The subsidiary was founded in spring 2025 (which was actually autumn in Australia).
- ▶ Previously, HELUKABEL was represented “down under” by its long-standing distribution partner, DKSH Australia. This year, the service and trading group sold its entire cable and wire division to HELUKABEL.
- ▶ Country Manager Stuart McEvoy and his team have since been serving customers in Australia, New Zealand, and neighbouring markets from their office and warehouse locations in Melbourne, Sydney, and Perth, and have sales teams in Adelaide and Brisbane.
- ▶ On the sun-drenched continent, the renewable energies industry is an important sales market for HELUKABEL with strong product offerings in photovoltaics and battery energy storage systems (BESS). The mining industry and wholesale markets are also among their leading customers.
- ▶ With the establishment of HELUKABEL Australia, the Group is now represented on every continent except Antarctica.

FUN FACTS

The culture of the Australian **ABORIGINES** is the oldest existing culture on earth. It is estimated that the indigenous people settled on the red continent more than **60,000 YEARS** ago.

With only about **3.5 INHABITANTS** per square kilometre, Australia is one of the most sparsely populated countries worldwide. However, in terms of gross domestic product, the country ranks 14th in the world.

Australia's wildlife is unique, with numerous species found exclusively there. These include well-known animals such as koalas, kangaroos, and wombats, but also exotic species such as the **PLATYPUS** and the **ECHIDNA**, the only egg-laying mammals in the world.



Kangaroos and emus cannot walk backwards!

This is one of the reasons why they appear on the Australian coat of arms: the animals are said to symbolise **PROGRESS** and **FORWARD THINKING**.



Australia has more than **10,000 BEACHES**. If you visit a different one every day, it will take more than **27 YEARS** to see them all.

AROUND ONE MILLION WILD CAMELS roam the Australian desert regions. They were introduced from Afghanistan in the 19th century as working animals, and today, there are so many of them that they are even exported to other countries such as Saudi Arabia.



FAQ

How Do You Avoid Corkscrewing in Drag Chain Cables?

Highly dynamic drag chain applications present a major challenge for electrical cables, especially due to the high mechanical loads caused by constant movement. An often overlooked, yet common, type of damage is torsional damage, or "corkscrewing". But how does this phenomenon occur, what are the risks associated with it, and, above all else, how can it be avoided?

The term corkscrew describes a helical deformation of the cable across its longitudinal axis that occurs gradually across many bending cycles. It is caused by faults in the design of the cable, the use of inappropriate cables, or the incorrect implementation of the complete system. The stranding structure of the cores plays a major role. If the lay length, or the length of the rotation of the cores, is too long or sub-optimally tuned to the cable's design, internal tension occurs which, with repeated movement, discharges as a spiral-shaped deformation. Equally problematic is when the minimum bending radius is exceeded. If this is ignored when constructing the drag chain, substantial loads develop that can damage the cable over time. All of these issues become even more critical the longer the travel distance is.

Another cause of corkscrewing is erroneous handling during installation. Cables that become twisted when being unrolled, or are placed under tension when being installed, accumulate energy that is later released during operation. To combat this, it is advisable to utilise an unwinder, for instance, which prevents twists in the cable from developing.

The consequences of a corkscrew are serious. In addition to the visible, exterior deformation, core breakages also often occur which can lead to errors in the transmission of energy and data. If a wire breaks, it can pierce through the sheathing of other

cores causing short-circuits, or, in the worst case, it can lead to fires. Furthermore, a deformed cable reduces mobility within the drag chain and can cause mechanical obstructions to the chain or other cables.

Precise construction and proven quality

To minimise this risk, it is essential to select the correct cables. The new HELUKABEL brand HELUCHAIN offers cables that are specially designed for use in drag chains—they are constructed using materials and stranding techniques that are precisely tuned to the requirements of dynamic applications. In cores with short lay lengths, a gusset-filling, extruded sheath balances out the mechanical stresses. Cables with large numbers of cores are often stranded in bundles to provide an increased lifespan during complex, dynamic movements. To ensure their reliability, HELUCHAIN cables are subjected to comprehensive testing under lifelike conditions and with millions of bending cycles.

In addition to choosing the correct cables, they must also be installed correctly. This means that the cables should be installed in separate channels in the drag chain. If this is not possible due to a lack of space, it is important to ensure that any cables that are touching are made using the same sheath material. This reduces the risk of disruptions. To ensure the long-term stability of the cable configuration within the drag chain, the use of tension relievers on both the fixed and moving ends of the chain is required. ◀

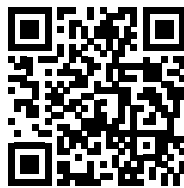
About the expert:

Andreas Muckes is the Senior Product Manager Solutions at HELUKABEL



OUR TRADE SHOW DATES

HELUKABEL will be exhibiting at various trade shows around the world over the next few months. Please check our website **helukabel.de/trade-shows** for an up-to-date overview of the dates and locations. We look forward to your visit!



HELUKABEL ON SOCIAL MEDIA

We use our social media accounts to share all the latest news from the HELUKABEL world with you: from product innovations and successful customer projects to delving deep and sharing knowledge on technical topics concerning electrical connection technology. Would you also like to stay up to date? Then follow us! We can be found on the platforms listed below:



Imprint

PUBLISHER:

HELU KABEL GmbH
Schloßhaldenstraße 10
71282 Hemmingen
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PRINTING AND PROOFING:

W. Kohlhammer Druckerei GmbH

Published semi-annually.

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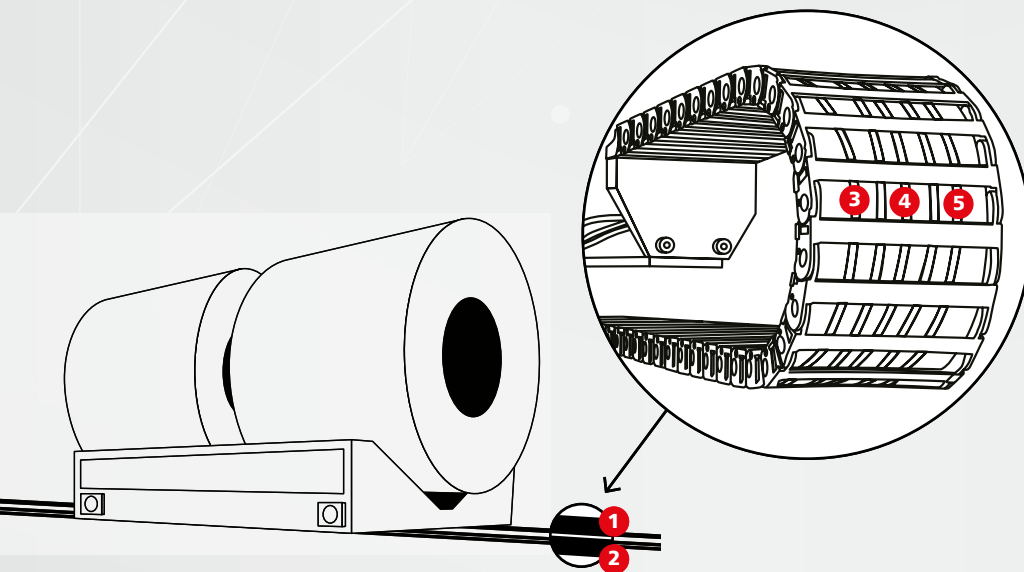
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Special solutions are required for the steel industry's coil transport shuttles and other applications. Our steel and stainless-steel drag chains, heat-resistant and highly flexible cables, as well as custom-designed cable protection components make an important contribution to ensuring that production and handling systems operate reliably under extreme conditions.

- 1** The HELUCHAIN STEEL LINK 4-SL **steel link drag chain** is available in steel, hardened steel, and stainless steel. Its high temperature resistance and mechanical stability make it an ideal choice for demanding applications in heavy industry.



- 2** The HELUCHAIN STEEL LINK 4-GK **large steel chain** is produced according to individual customer requirements and is especially suited for large cable quantities, large inner heights, special bending radii, and self-supported lengths up to 20 metres. It is also available with solid, steel segment coverings that protect cables from sparks and other external influences, as well as with grime-resistant chain links.



- 3** The HELUTHERM 400-MULTI-ES **high-temperature cable** is equipped with robust, stainless-steel braid and a fibre-glass core insulation that is treated to be especially heat resistant. It can withstand temperatures up to 400 degrees Celsius and is resilient against chemical and mechanical loads.



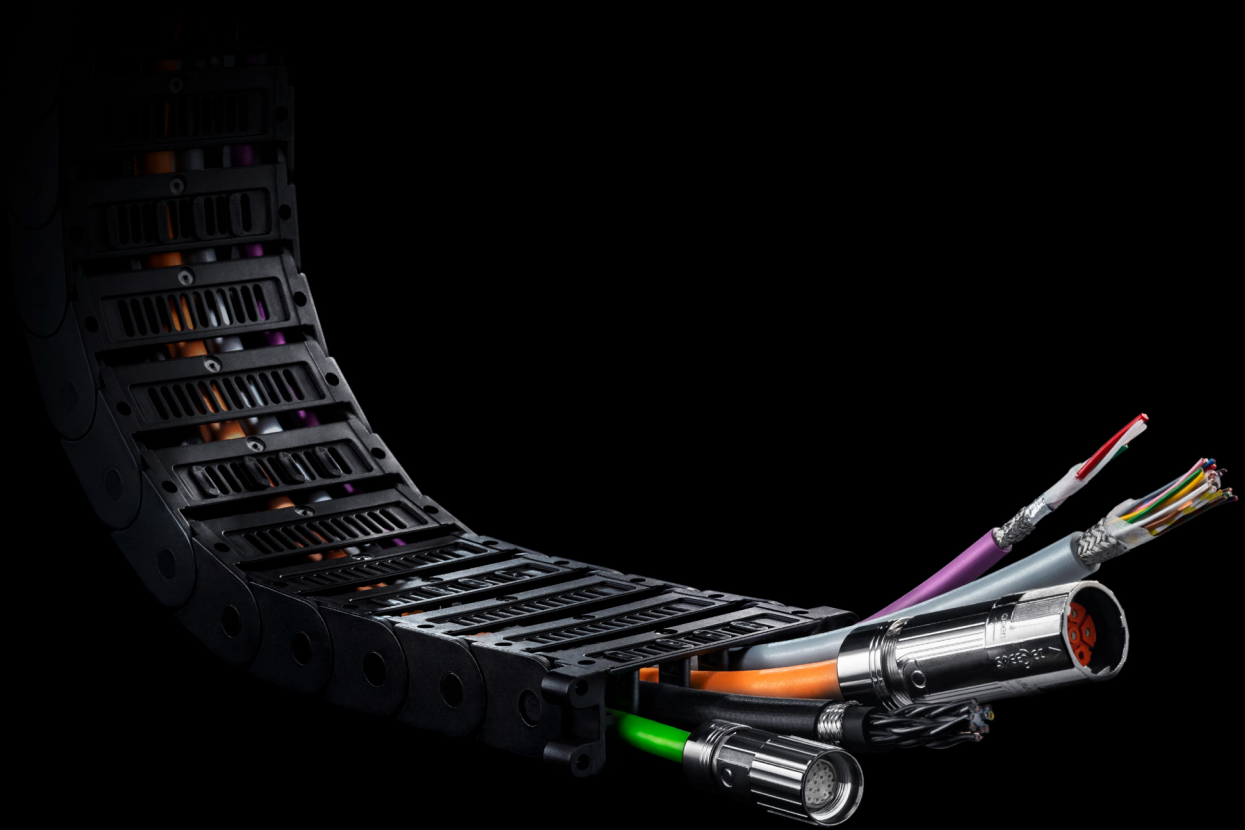
- 5** HELUCHAIN MULTISPEED **drag chain cables** are designed for the constant dynamic movements of drag chains. They have a high flex life, even when subjected to tight bending radii, and are available with different sheath materials for different external loads.



- 4** The HTP-PT **cable protection tube** is known for its resistance to extreme heat. With an inner tube made of a knitted, fibre-glass braid and a silicone outer sheath containing iron oxide, it is suited for temperatures up to 800 degrees Celsius and can even withstand small amounts of molten steel.



Chains, Cables, Assemblies: Quality from a Single Source



**(Channeling
POWER)** 