

The HELUKABEL Group customer magazine

POWER

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#7
2017/02

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guarantee zero-emission
mobility**

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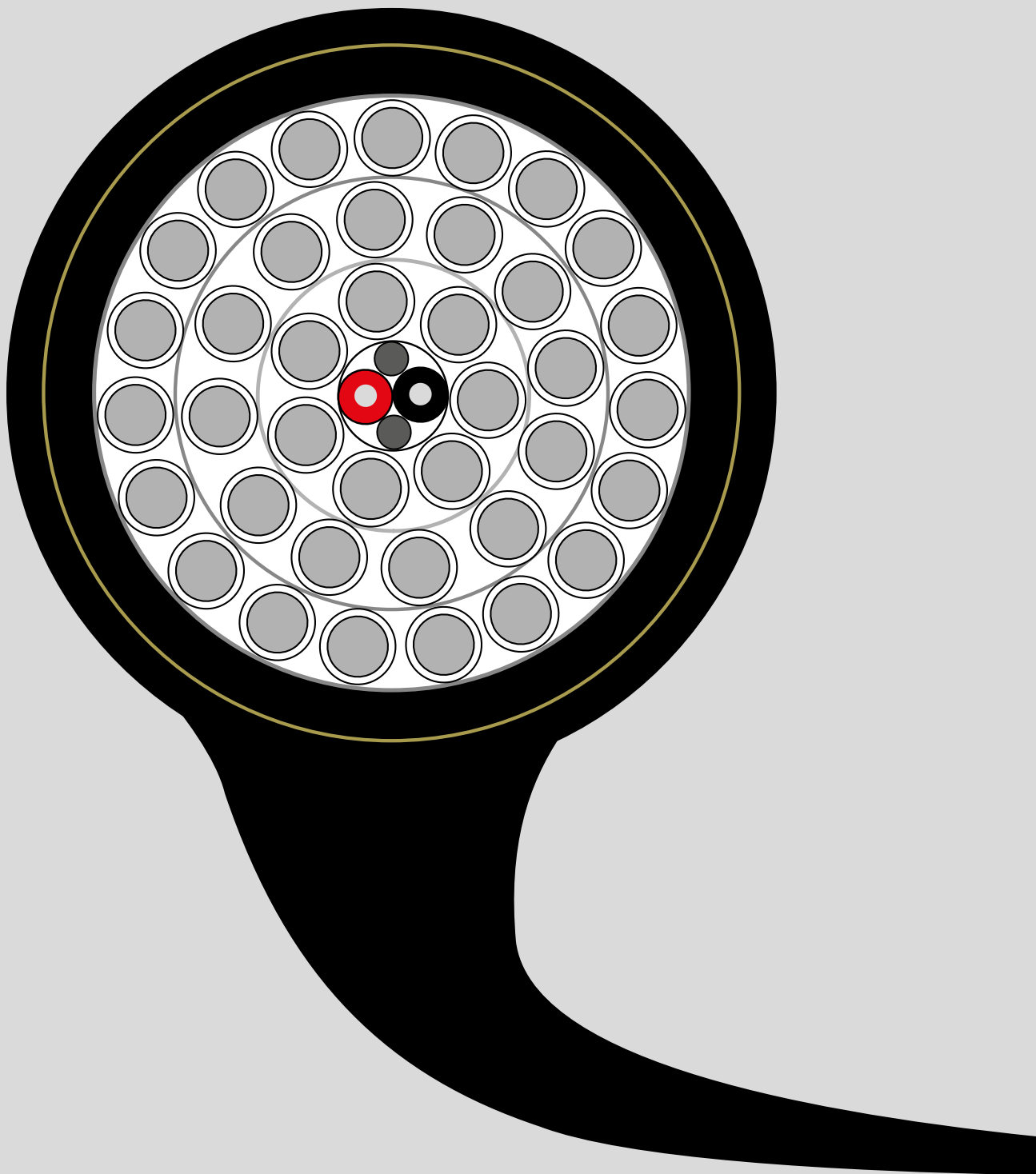
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WHERE DOES
CABLING GO?



DEAR READER,

The Greek philosopher Heraclitus once said "Big results require big ambitions" – a motto that has inspired me since the start of HELUKABEL. The ambition to progress further, compete in the world market, and gain a foothold in new markets is still strong after nearly 40 years of being in business.

Our success is not only reflected in the inauguration of new subsidiaries in Brazil and Mexico (p. 7), but also in the extension to our production plant in Windsbach. New machinery enhances the ultramodern plant and equipment pool; investment in the expansion of our test and inspection centre promises first class quality for the future when it comes to high-tech "Made in Germany" cables. An interview with the Chief Technology Officer of HELUKABEL gives insight into cable development and production (p. 28).

The result is that our high-tech cables not only enjoy a tremendous view of the Allgaeu Alps (p. 18), they are also used by one of the global market leaders of container spreaders, Bromma, in ports around the world. Therefore, we are more than delighted that HELUKABEL Malaysia was named Supplier of the Year by Bromma (p. 6).

I am proud of where we are today and what we have achieved – thanks to our loyal customers and dedicated employees. The new edition of POWER that you're now holding in your hands, hot off the press, is the best proof of this.



Yours sincerely,

Helmut Luksch
Managing Director, HELUKABEL GmbH

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METICULOUS DOWN TO THE SMALLEST DETAIL

Michael Stadler, managing director of Inntal Kabel, is an expert on small things: electronic modules, switching cabinets and cable assemblies. His ready-to-install solutions let customers concentrate on their core skills.



The HELUKABEL runners team up to participate at the Ditzinger Sponsored Walk and Run.

A COMMITMENT TO RUNNING

IN 2017, HELUKABEL employees once again took part in a special event for a special cause: the 19th Ditzingen Sponsored Walk and Run. This fundraiser is not about speed but distance: runners and walkers – some of them with baby strollers – are sponsored for every kilometre they cover. The money raised is then donated to Mukoviszidose e. V., a German cystic fibrosis charity. Fantastic weather enhanced the fun and the 18-member team from HELUKABEL gave their best. At the end of the day, 3,719 participants walked or ran a total of 48,007 kilometres (30 miles). For more than 10 years, HELUKABEL employees have committed themselves to this event. ■

MORE SAFETY IN THE EVENT OF FIRE



HELUKABEL HAS A large product portfolio of cables and wires that meet the Construction Production Regulation EU 305/2011. This became mandatory as of 1, July 2017. All cables that will be permanently installed in buildings, are CE approved

and have a declaration of performance. The goal is to increase building security and counteract the spreading of fires. Depending on the type of building and fire risk, HELUKABEL is prepared with its certified products including fire protection classifications.

For more information: www.helukabel.com/cpr ■

Appreciation and Motivation

A SPECIAL REASON TO CELEBRATE for the staff of HELUKABEL Malaysia: This past March they were honored with the supplier award for "Best Delivery Supplier" category by Bromma, a global leader in the development, manufacturing and sale of spreaders and hoisting cranes that are used in more than 500 ports around the world. The company sources control cables and single cores as well as custom-designed products from HELUKABEL Malaysia. Daniel Dahlqvist, Vice President of Global Operation & Sourcing at Bromma, presented the award to KY Liew, Managing Director of HELUKABEL Malaysia, at a supplier convention. And this pleased him very much: "We are in regular contact with our HELUKABEL colleagues in Germany and Singapore to ensure we are able to offer our customer optimal delivery times as well as excellent labelling and packaging quality. Our customer's appreciation motivates us to continue doing our best in the future." ■



Bromma Vice President of Global Operation & Sourcing Daniel Dahlqvist (left), presents an award to HELUKABEL Managing Director KY Liew for outstanding supplier support.



Juan José Chaparro Schmiel (left) and Gerardo Montenegro Aznar (right)

Bom dia! ¡Buenos días!

WITH NEW SUBSIDIARIES in Brazil and Mexico, HELUKABEL is stepping up its commitment to the Central and South American markets. The subsidiaries are located in the industrial centres of each country, where numerous European companies already have their branch offices. Their central location and the excellent infrastructure guarantee fast delivery times. "We're starting with a basic framework of products and will slowly expand our product portfolio as customer demand grows," explains Gerardo Montenegro Aznar, managing director of the Mexican subsidiary. "Our aim is to be close to our customers and to develop a sense of the respective market needs," adds Juan José Chaparro Schmiel, managing director in Brazil. To this end, both managers are building up a network of account managers in order to provide first class, on-site service, customised solutions and high warehouse availability. ■

PRODUCT TICKER



"PLUG AND PLAY"

HELUKABEL provides pre-assembled power and connecting cables for the Industrial Ethernet cable market. With moulded M12 and RJ45 industrial connectors, customers can use a building block concept to create every possible combinations of cables and connectors to "design" a product based on their specific needs. As a system provider of cables, wires and assembly components, customers have access to a wide product range of cables.

For more information, contact
Juergen.Berger@helukabel.de

HEXAGONAL PRESSING

The HAZ 16 HELUTOOL pliers ensure uniform pressing of ferrules from six sides – even when they don't fit closely to the core. The crimping pliers for insulated and uninsulated ferrules are preferred for their ergonomic design, automatic cross-sectional adjustment and small diameter compared to square and conventional trapezoid pliers.

For more information, contact
Susanne.Moeller@helukabel.de

THE RAINMAKERS

The Pröhl company makes sure the turf at the Iffezheim Racecourse is kept crisp and green even during hot summers.



There is a long tradition of horse racing at the Iffezheim race-track in Baden-Baden, Germany with the first starting shot being fired back in 1858. Last year the operator refurbished the somewhat antiquated facility, which involved an investment of approximately EUR 1.2 million (USD 1.4 million). Part of this money was spent on installing a sprinkler irrigation system. The system was planned and installed by

Volker Pröhl GmbH, a well-established company based in Umkirch near Freiburg im Breisgau. Before installation could begin, the experts from Pröhl had to carefully dig trenches for the cables. Special state-of-the-art machines were used to minimise damage to the turf. A total of 10 kilometres (19 miles) of type NYY underground cable from HELUKABEL now connects nearly 200 sprinklers. The cable serves as both power and control cable.

A variety of sprinkler programs for different weather situations can be configured via the system's control unit. Two deep wells capable of supplying 180 cubic metres (47,550 gallons) of water per hour were installed for spraying the racecourse during summer dry periods. The optimal race surface is soft turf because it is easier on the joints of the valuable race-horses and a prerequisite to ensuring they can race safely. ■



THE JOY OF DRIVING WITHOUT EMISSIONS

Hydrogen fuelling stations from Linde for zero-emission mobility.

A silver car slowly approaches, accelerates and drives away. It almost seems to be floating because there's nothing to hear except a gentle humming. What sounds like a strange futuristic vision is already reality in many places. Car manufacturers around the world are working on alternative drive concepts. Alongside vehicles with electric motors, fuel cell vehicles are also beginning to conquer the roads. These vehicles run on hydrogen gas, which the fuel cell converts into electricity, to power an electric motor. Only water vapour comes out of the exhaust pipe. A prerequisite for more fuel cell vehicles on the road is the corresponding expansion of the refuelling infrastructure. This is why Linde AG are currently taking part in the Clean Energy Partnership (CEP) initiative with 19 other industrial partners. "First we want to install 50 hydrogen fuelling stations in the larger cities and along the main corridors," explains Linde Senior Expert Hydrogen Solutions Michael Westermeier. "As soon as the primary refuelling infrastructure is in place, the next stage will be to expand into the surrounding areas," he adds.

A mighty midget!

The hydrogen pumps are generally located in the front of a conventional fuelling station. This location is the problem: When you factor in the shop, car wash and vacuum cleaning facilities, there's not much space for anything else. Westermeier and his team have developed a compact solution: a tank system with cryo pump. All that is needed is

Hydrogen vehicles have **a uniform fuelling port** that is standardised worldwide.

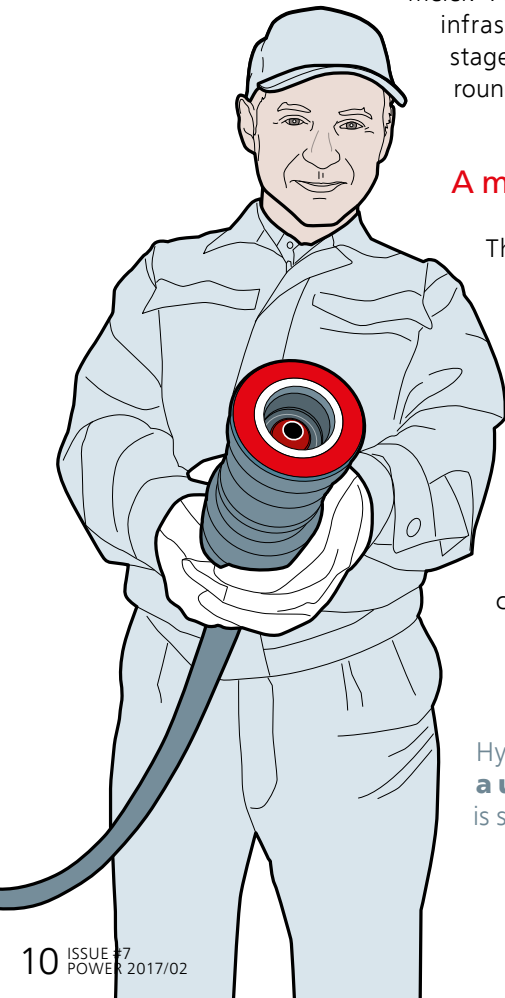
an area 2.5 by 6.4 metres (8 by 21 feet) to install the system consisting of an equipment container and a storage tank. "This makes ours the most compact system on the market. We achieved this by storing the hydrogen in liquid form because it has a much higher energy density than compressed hydrogen gas," said Westermeier. The new generation of tanks have a storage capacity of 400 kilograms (882 pounds). When combined with a supply tank, between 130 and 140 vehicles can be refuelled. Moreover, the pump consumes only a fraction of the energy consumed by other compressors, thanks to direct compression.

Under Pressure

The tank system works by using a cryo pump, an electric motor, high-pressure storage banks and heat exchangers. The minus 253 degrees C liquid hydrogen flows out of the storage tank into the first pump chamber and is pumped into the second chamber by the upward movement of the piston. Here, the downward movement of the piston increases the final pressure to 900 bar. The hydrogen is now in gaseous form and flows into the storage banks. When the driver places the fuel nozzle onto the car's intake port and presses

500 BUSES

with a fuel cell should be rolling on Europe's roads **by 2020.**



the start button, the system automatically checks to ensure the connection is leak-proof. Hydrogen then flows from the storage banks and the pump into the car. The gas from the cryo pump still has a temperature of about minus 220 degrees C, while the gas from the storage banks is at ambient temperature. Mixed together, they have the perfect fuelling temperature of minus 40 degrees C. This temperature is important since hydrogen heats up when filled into the vehicle's tank. As soon as the tank is full or the driver presses the stop button, fuelling stops. This allows the fuel cell vehicle to be filled just as easily as a conventional car.

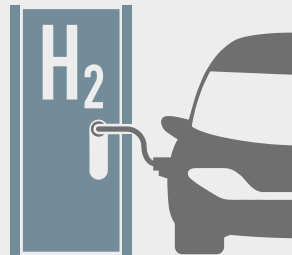
Back on the road in a jiffy

"Our cryo pump fuelling stations are capable of completely filling six tanks an hour as the storage banks need less than 10 minutes to refill themselves. Compressor fuelling stations aren't capable of this," points out Westermeier. When it comes to choosing components, Linde needed reliable suppliers, especially for their cables. The computer cable connecting to the external sensors and actuators stands out for its reinforced outer PVC sheathing. Additionally, the static screening protects the screened pairs from external electrical noise. Fuelling data is transmitted from the dispenser to the tank's control system through a HELUKAT 600E Ethernet cable. Thanks to its durable, cold-resistant and reinforced PVC sheathing, this cable is well-suited for direct burial installation. "Our great business relationship stretches back over many years and we are very satisfied with the availability, delivery times and price-performance ratio offered by HELUKABEL. That's why they were the right partner for this project," sums up Westermeier.

Finally, it only takes three minutes to refuel a hydrogen vehicle. Then the driver can whizz off again – quietly and emission-free.

7

FACTS ABOUT HYDROGEN



100

hydrogen fuelling stations should be in operation in **by 2018**.

With a full tank, an H₂ vehicle has a range of up to

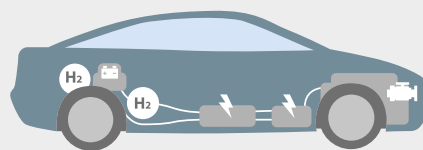
700

kilometers (435 miles).



314 CARS

with a fuel cell are currently on Germany's roads.*

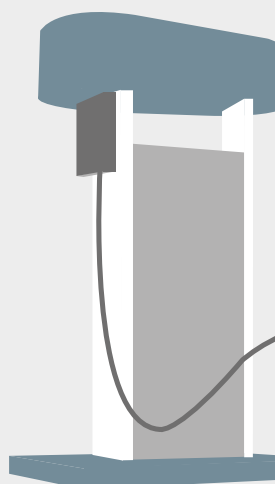
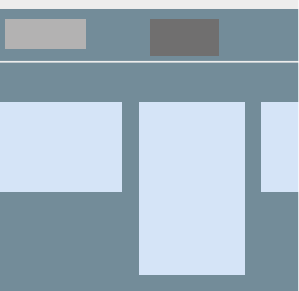


* Date January 2017

3 MINS



is the time it takes to fill a
H₂-vehicle.



7 - 13

pounds

is the capacity of a typical hydrogen vehicle tank.

€ 9,50

is the cost of one **kilogram (2.2 pounds)** of hydrogen.

TREASURE HUNTING MADE EASY

OKM GmbH has made what treasure hunters, well drillers and archaeologists have long been dreaming of: a look below ground without heavy equipment.

Anyone visiting OKM GmbH in Altenburg, Thuringia, Germany won't have trouble finding the place. The company is headquartered in a 28-metre (92-foot) high golden pyramid, which shines brightly in the centre of an industrial complex. Here, a staff of 20 develop, manufacture and commercialise detectors and geophysical instruments for treasure hunters, well drillers and construction companies. "The most important target group are the treasure hunters," explains Christian Becker, software expert at OKM. "Thanks to our products, the most amazing things have been found, such as antique weapons from the Persian Empire or ancient Qing Dynasty coins. It's only logical that our headquarters should be something exotic and eye-catching."

From garage to pyramid

Things weren't always this glamorous though. The company started in a garage in Chemnitz nearly 20 years ago when Andreas Krauß, an enthusiastic treasure hunter himself, became unsatisfied with the quality of metal detectors and decided it was time to make something better. After teaming up with Ingolf Müller, now OKM's other managing director, and further expanding the product portfolio, they opened a subsidiary in the United Arab Emirates in 2006, and finally moved into the pyramid at the gates of Altenburg in 2012.

One of the products recently launched by OKM is the GeoSeeker, a geoelectrical detector capable of locating aquifers and underground cavities. On a test site next to the golden pyramid, Christian Becker demonstrates how this device works during a visit by HELUKABEL area sales manager, Andreas Pockrandt. He pushes four electrodes into the ground to form a line with the outer pair and inner pair of electrodes connected separately to the control unit via white HELUKABEL SiFF silicone cables. Becker uses his tablet to instruct the two outer electrodes to pump current into the ground. The potential differences measured by the inner electrodes allow an image to be created that shows the nature and consistency of the ground below. If the current flows through an aquifer, impedance is low; if it encounters an air-filled cavity, impedance increases. The further the electrodes are placed

The GeoSeeker, a geoelectrical detector, measures potential differences in the ground.



**Prominent headquarter office:
OKM develops, manufactures
and commercialises their
products in a golden pyramid.**



apart, the deeper the measurements go into the ground. The combination of numerous measurements is analysed by software to determine what lies below the area under investigation.

of the ground, thereby eliminating the need for drilling hundreds of exploratory holes," comments Becker. That is the idea: no heavy equipment and no unnecessary damage to the ground. ■

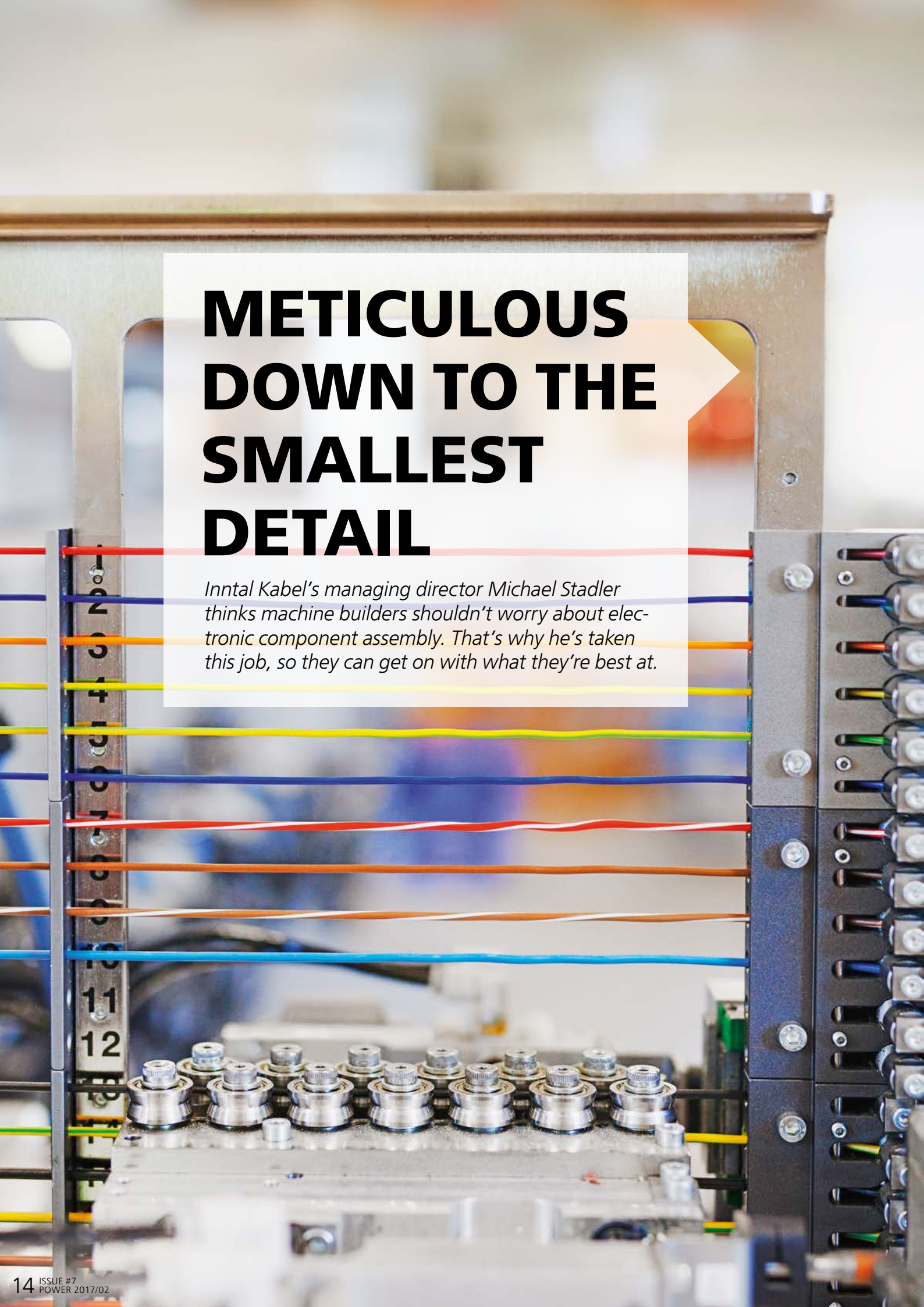
Not for delicate cables

The first demo measurement finishes after a few minutes, and Becker moves the cables two metres (six-and-a-half feet) sideways. "In practice, the measured area is much greater, of course," explains the computer science graduate. "That's why the cables connected to the current-pumping electrodes are 250 metres (820 feet) long." OKM decided to use HELUKABEL silicone cable primarily because of its flexibility and resilience. "The cable can be easily rolled and unrolled," explains Andreas Pockrandt. "Additionally, it's very rugged." This is important because rather than completely rolling up and unrolling the cable each time, the fully unrolled cable is often dragged across metres of rough ground. "HELUKABEL SIFF cable copes well with this kind of treatment," comments Becker. Another advantage is its white colour, which makes it clearly visible on grass or soil.

As with all of OKM products, the GeoSeeker is mainly used in the Middle East, South America and Africa. Alongside treasure hunting, customers primarily use the device to carry out preliminary investigations for water wells and other building projects. "The GeoSeeker provides users with contactless information about the consistency, nature and water content



**From the data collected,
the GeoSeeker creates an image
that shows aquifers and underground cavities.**



METICULOUS DOWN TO THE SMALLEST DETAIL

Inntal Kabel's managing director Michael Stadler thinks machine builders shouldn't worry about electronic component assembly. That's why he's taken this job, so they can get on with what they're best at.

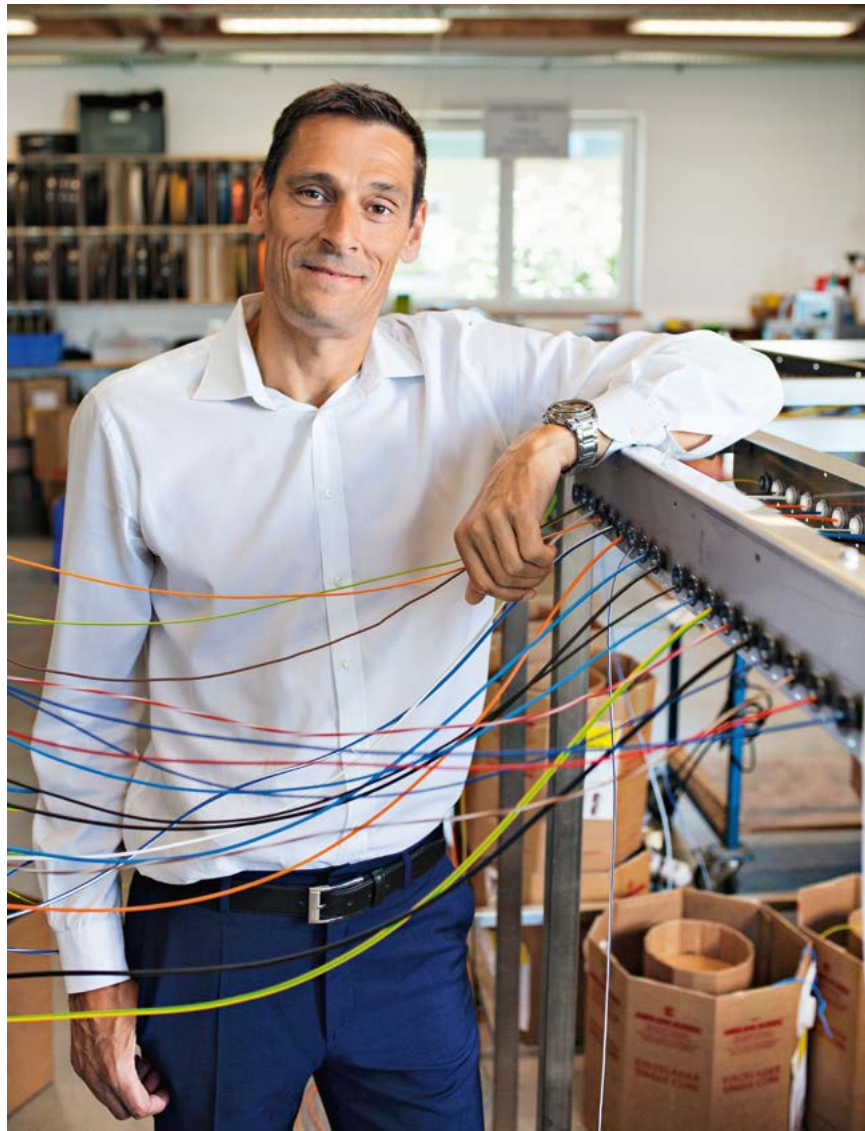
It's 8.30 a.m on a Thursday morning and just like every week, a delivery truck punctually drives up to the entrance of Schechtl Maschinenbau GmbH in Bavarian Edling. It's loaded with cable harnesses, pre-assembled modules and switching cabinets for high-performance universal fabricating machines. The quantities delivered by Inntal Kabel-Konfektion GmbH, just 40 kilometres (25 miles) away, are precisely calculated for the week's assembly schedule. Schechtl and Inntal Kabel have been working together for many years. Each company does what it's best at: one designs and builds state-of-the-art precision sheet metal fabricating machines; the other deals with the complicated details of the indispensable electronic sub-assemblies. The requirements for this partnership are reliability and trust, which are the basis of all Michael Stadler's business relationships.

Turbo production for machine building

Inntal Kabel is headquartered in Raubling, 10 kilometres (6 miles) south of Rosenheim near the beginning of the Bavarian Inn Valley. Michael Stadler's customers are machine builders, which are plentiful in the area. "There are lots of innovative companies around here and about 50 of them are regular customers of our," the owner reports. Inntal Kabel provides assembly of cables, modules and switching cabinets, but the company also provides customers with the full package: consulting as early on as the machine design stage, purchasing of all components, ready-to-install assemblies, optional temporary storage for finished goods and, of course, reliable delivery – including just-in-time delivery straight to the assembly line.

Profitable in every way

Schechtl, a machine builder, is a good example of how it pays to leave electronic components to the experts. "We've been working with Inntal Kabel since 2003. At that time, we had one electrician who built the electronic modules in a small workshop," recalls owner Maria Schechtl. "This man was always there, even when there wasn't much to do. On the other hand, if he wasn't there, things could get very tight. His skills



Michael Stadler is versed in electronic components. His expertise, technical abilities and industry connections make him a valuable partner for his customers.

were indispensable." When the electrician retired, Schechtl decided to go whole hog and accept the full package from Stadler. "This partnership made life easier for us in a number of ways," she says. "It saves us time, money and resources." Instead of using their expert skills on electronic sub-assembly, Schechtl now relies on Inntal Kabel. "As a result, we can react quicker to order fluctuations," says Maria Schechtl.

Making good use of contacts

The 300 cable types from HELUKABEL provide Inntal Kabel with an extensive assortment. The electronic sub-assemblies built by the system supplier for Schechtl also contain cables from the Hemmingen cable manufacturer. "Just as our customers rely on us, we have to be able to rely on our subcontractors," reports Stadler. This is why he's been working in close cooperation with HELUKABEL for many years. "Our sales representative at HELUKABEL, Philipp Walter, is always a great help when it comes to giving us advice about a suitable cable for a specific machine. As a bulk purchaser, we also have a strong negotiating position on price." Schechtl benefits from this business arrangement because they have been able to dispense with the cost of their workshop and material procurement as well as their cable assembly tools – some of which were quite expensive. "The professional expertise of Inntal Kabel and their partners is very important to us. The abun-



HELUKABEL sales representative Philipp Walter (left) helps Michael Stadler find the right cable.

dance of products in the market makes it extremely difficult for our buyers to always find the perfect cable for every application. The purchasing department of Inntal Kabel have a much better insight into the market and can judge which cable is the right one in terms of quality, application and value," says Schechtl. Today, Schechtl is sending their bill of materials for small parts to Inntal Kabel, who in turn will send fully assembled modules with the proper documentation, of course.

Connected with the region

Michael Stadler is often asked how he manages to keep a competitive edge in a high-wage region like Bavaria. "Many competitors have moved their manufacturing across the border. However, this imposes a higher level of logistics and has a negative impact on response times. The supposed benefits are offset by the difficulties of installing the logistics, factory, know-how, qualified staff and floor space in these countries," claims Stadler.

"Thanks to our unique and flexible employee model, we always have a sufficient supply of manpower. Another advantage is that we can handle orders on short notice while keeping our promise of high quality," he adds. The headquarters in Raubling houses 90 employees whose skillset includes purchasing and sales, material handling, production, complicated assembly work, and quality management.

Responding to customer needs

In order for Inntal Kabel to be able to extend its product portfolio of switching cabinets, Stadler recently invested in a single core cabling machine from Komax. Among other things, Inntal Kabel regularly purchases

For the region, in the region:
Inntal Kabel manufactures in
close proximity to their
customers.



Managing Director Maria Schechtl purchases the electronic components for her universal fabricating machines from Inntal Kabel.



With the new Komax single core cabling machine, Inntal Kabel is expanding their switching cabinet product portfolio.

FIVENORM hook-up wire from HELUKABEL for the high-tech machine. This PVC-sheathed single core wire is compliant with five international norms: HAR, UL, CSA, AWM, and MTW. "This multi-norm cable covers market requirements around the world and can be used everywhere," explains HELUKABEL area sales manager Philipp Walter. Another special feature is that HELUKABEL embosses the stipulated names on the conductors. Inntal Kabel then uses the Komax ma-

chine's built-in ink jet printer to label the connectors. "This helps both Inntal Kabel's wiring technicians and our customers because it makes cabling as simple as 'painting by numbers'. It's really easy to connect the designated cable to the proper hook up in the switching cabinet with the corresponding marking," explains Stadler. This has reduced wiring time in half. "Our customers and staff can now use this time for more sensible things," he continues. ■



TWO HELPERS AT THE FAIRY TALE CASTLE

Neuschwanstein Castle is an architectural masterpiece situated in a stunning location. However, the castle's location is what made the recent renovation of the outside walls so difficult. Two transport platforms from the Bavarian company, GEDA, helped the restoration team perform their tasks in this difficult terrain.



Neuschwanstein Castle in all its new glory: transport platforms from GEDA facilitated the renovation of the walls despite difficult conditions.



Neuschwanstein Castle is majestically perched on the top of a mountain with fantastic views of the Ammergau Alps. Every year approximately 1.4 million visitors make their way to the place where the “Fairy Tale King”, Ludwig II, realised his romantic dream of a knight’s castle in the 19th century. Time, though, has taken its toll on the idyllic location. The tough mountain environment has severely impacted the building’s limestone walls. A complete restoration was needed urgently. The two most pressing jobs: repair cracks causing water leaks and replacing the grout.

Beautiful as the exposed location of the fairy tale castle is, it made access to the building very difficult for the construction crew and their machinery. The greatest challenge was erecting scaffolding around the north and west walls which directly abut the almost vertical sides of the mountain. Workers had to place a mounting platform against the rock 10 metres (33 feet) up and then erect additional pieces of scaffolding on top of this base platform. Crew members, material and machinery were taken to the dizzying heights of their workplace by two 500 Z/ZP transport platforms from GEDA, the Bavarian hoist manufacturer. This standard mobile solution is

comprised of pre-assembled units that can be moved from one restoration site to another, and can quickly and easily be put together/dismantled by a two-man team. One transport platform led to the mounting platform; the other scaled the 38 metres (125 feet) of the castle’s tallest tower. “A benefit of loading platforms is that they’re open-air. This means they can also be used to transport bulky equipment,” said Johann Sailer, managing partner at GEDA. Each platform has a capacity of five people and 500 kilograms (1,100 pounds).

Rugged material

Being out in the open means the transport platforms are constantly ex-

posed to wind and weather. Material and design must be resilient to all kinds of wear and tear. The same applies to the power supply and feedback cables. “We need cables with a long service life for our transport platforms. The 500 Z/ZP is a rack and pinion hoist. When it goes up, the cables for the electric motor dangle in the air and making them very exposed,” explains Sailer. This is why GEDA opted for HELUKABEL products: “Along with a large product assortment, we appreciate their high warehouse availability and short delivery times. Additionally, HELUKABEL manufactures the cables uniquely for us, so we can be 100 per cent sure of the quality,” says Sailer. In the meantime, the north and west walls are free of scaffolding and the transport platforms have been moved to other building sites. ■



OTTMAR SCHNEIDER

HELUKABEL’s southern sales manager. GEDA has been part of his customer base for more than 20 years. Once again, he convinced the hoist manufacturer of the quality of HELUKABEL cables for the Neuschwanstein Castle project.



Stefan Kaupp from VEGA (left) and Manfred Wössner (right) from KABELMAT turn the colossal machine RINGROL 600 into a lightweight.

COMPLETE LIFT-OFF

At VEGA Grieshaber, a KABELMAT coil winding machine floats from rack to rack as light as a feather.

The RINGROL 600, a semi-automatic coil winding machine, from KABELMAT weighs a hefty 800 kilograms (1,764 pounds). Staff at the VEGA Grieshaber KG cable assembly facility would work up a good sweat if they had to push it to the shelf with the required cable drum. But luckily they don't have to as their machine is equipped with an extraordinary feature. At the press of a button, the colossal machine hovers above the ground on a cushion of air.

The idea for this unusual feature came to Stefan Kaupp, segment

manager for pressure instrumentation production at VEGA Grieshaber on a visit to one of his suppliers. "I saw air cushions on a machine that was being moved around a lot and thought to myself, that would be the ideal solution for us."

Courageous problem solving

At the VEGA cable assembly facility, cable drums are stored on permanently fixed shelves. The coil winding machine is pushed in front of the drum when a cable needs to be

cut. "Since we more or less only assemble custom cables, we often have a batch size of one. This means the cutting machine is constantly being moved back and forth," explains Kaupp.

The KABELMAT RINGROL 600 used in the factory is typically fitted with castor wheels and brakes. Unfortunately, these sank into the factory's PVC floor making it even more difficult to move the heavy machine. Stefan Kaupp didn't hesitate to put his idea into practice. He gave the machine builder, who had installed the air cushion on their own machine, the job of redesigning his

"The air cushions that allow the RINGROL 600 to float are an ingenious way of moving our coil winding machine."

MANFRED WÖSSNER,
SALES MANAGER OF KABELMAT
WICKELTECHNIK GMBH

coil winding machine. "It immediately became easier to manoeuvre the machine, which in turn made the staff's lives easier," he recalls.

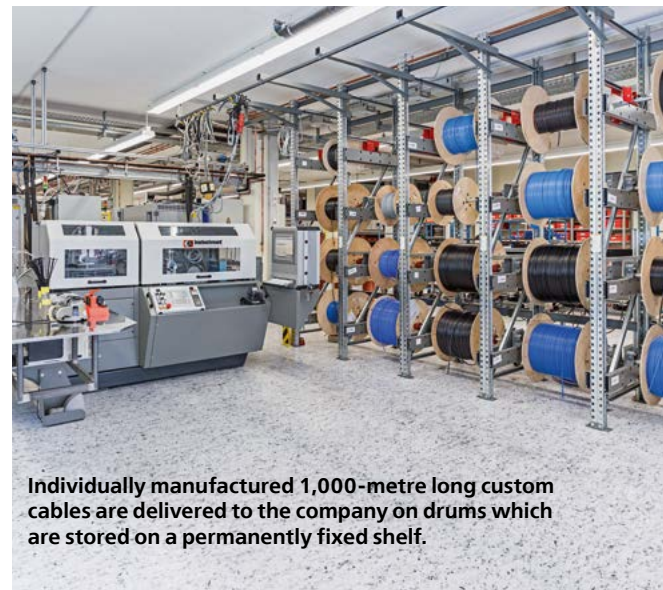
From good to even better

When the VEGA subsidiary in Cincinnati, OH, USA ordered a new KABELMAT RINGROL 600, Stefan Kaupp was adamant that air cushions be used instead of castor wheels. "We've always been very satisfied with the service from KABELMAT so I talked to their sales manager, Manfred Wössner, about integrating our air cushion idea into the new machine. It was absolutely no problem for KABELMAT to do

this," says Kaupp. While they were at it, KABELMAT also implemented a very practical handle and start button system that further facilitated machine manoeuvring. The new RINGROL 600 now sits on a subframe that is fitted with four, 40-millimetre (1.5-inch) diameter rubber mats on the bottom side. When the operator presses the start button on the handle using their thumb, the nozzles in the centre of each mat generate a layer of air under the rubber mats. This lifts the machine two or three millimetres (one-tenth of an inch) off the ground where it floats until the operator switches off the airflow. "Now it's more of a case of not moving too quickly to make sure the machine doesn't fly off of its air cushion," laughs Stefan Kaupp.

Beloved Magdalena

Luckily this hasn't happened yet, despite the new machine being a bit temperamental to start with. "First of all, prototypes aren't usually finished products because it's not possible to think about everything in advance. Secondly, lots of our employees prefer to work on things they're familiar with rather than



Individually manufactured 1,000-metre long custom cables are delivered to the company on drums which are stored on a permanently fixed shelf.

new concepts," Kaupp says casually. This was also the reason why the RINGROL 600 "diva" was given the name Magdalena. "But – and this shows our decision was completely right – our partners at KABELMAT were always quick and reliable when it came to tweaking the machine, and now we're totally satisfied with it," Kaupp continued. Colleagues at the assembly facility see it this way too because they wouldn't want to do without their Magdalena today since she's always floating so calmly above things. ■



Black Forest-based VEGA Grieshaber KG develops and manufactures level measurement, point level detection and pressure measurement sensors for the process industry. The company currently employs around 1,200 people and has subsidiaries and distribution partners in more than 80 countries.

A simple yet ingenious idea: a stream of air generated under four rubber mats lifts the heavy machine two or three millimetres (one-tenth of an inch) off the ground.





AGILE DELIVERY

CUSTOMERS WHO PLACE ORDERS WITH HELUKABEL do not need to exercise patience because orders received from within Germany, and a large part of Europe, are processed and shipped within 24 hours. This agile service is provided by 26 employees at the Hemmingen distribution facility who pack and ship 200 tonnes of cable, wires and assembly components every day. They prepare the goods for shipping – in accordance with customers' specific packaging instructions, if required – before handing them over to the appropriate freight forwarder. Packages weighing just one kilogram (two pounds) to cable drums as heavy as four tonnes are sent on their way around the world via road, ocean or air. HELUKABEL's status as an Authorized Economic Operator (AEO) means simplified custom procedures with no delays. Receiving orders at the customer's premises should also be straightforward. If requested, HELUKABEL will organize deliveries using low-bed trailers with a forklift, lifting platform or unloading crane. If the shipping address is comprised of just geographical coordinates, as is the case with wind power plants, HELUKABEL's logistic experts ensure delivery to the exact location in the open countryside.



POWER-INSIGHTS AT A GLANCE: POWER 2014/01: Incoming goods/
POWER 2015/01: High-bay warehouse/ POWER 2015/02: Small parts warehouse/
POWER 2016/01: Cut-to-length area/ POWER 2016/02: Heavy-duty cutting station/
POWER 2017/01: Pick-Packing / POWER 2017/02: Shipping

TRADE FAIR DATES



7. – 11. November 2017

CIIF China International Industry Fair 2017

Hall 6.1, Booth E 112, Shanghai, China

14. – 16. November 2017

Warsaw Industry Week

Warsaw, Poland

14. – 17. November 2017

Productronica

Hall A5, Booth 560, KABELMAT, Munich, Germany

28. – 30. November 2017

SPS IPC Drives

Hall 2, Booth 240 und 249, Nuremberg, Germany

12. – 14. December 2017

Elektro Vakbeurs

Hardenberg, Netherlands

6. – 8. March 2018

Middle East Electricity

Dubai, United Arab Emirates

10. – 13. April 2018

Prolight + Sound

Frankfurt/Main, Germany



FINDING THE RIGHT CABLE THE EASY WAY

HELUKABEL's online product finder helps customers to search through the extensive warehouse and delivery range to find the product they need. Whether you're looking for motor, servo and feedback cables, coaxial cables, power cables or cables for industrial Ethernet applications –you can use diverse filters to specify particular structure types and properties and hence speed up their search.

www.helukabel.com/productfinder

LEGAL DETAILS

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FAQ

*Some questions are asked again and again.
In each issue, one of our experts answers one of
these Frequently Asked Questions
(or FAQs as they're referred to on the Internet).*

WHAT'S BEHIND THE NAME 'INCOTERMS'?

ANYONE, who regularly orders goods from the internet likes reading about "free delivery". While post and packaging only amounts to a couple of euros for private individuals, the delivery terms applying to national and international goods trading are a fixed and key part of any contract. For these delivery terms govern far more than just post and packaging costs. To save companies the trouble of drawing up complicated contract clauses, in 1936 the International Chamber of Commerce published their so-called Incoterms (International Commercial Terms). These standard clauses govern the "hows and whens" of the delivery of goods. After numerous amendments over the years, the current version is Incoterms 2010 with eleven different requirements for the delivery of

merchandise. The terms applying to HELUKABEL and their customers are always individually negotiated. This normally involves tough wrangling, for the differences between the clauses are often very subtle and hence can be crucial to both contract partners.

Incoterms thus not only define how freight costs are split between buyer and seller, they also specify when and where the ownership of goods is transferred to the buyer i.e. the point of transfer of risk. This is of vital importance because this is when a whole set of statutory obligations such as loading and shipping costs, custom duty, export and import taxes and liability in case of damage is transferred.

The use of Incoterms is voluntary. If used though, the term "in accordance with INCOTERMS 2010" must specifically be included in the contract. If the contract partners agree to special provisions, these have priority over Incoterms. ■

3 FIGURES FOR
HELUKABEL

2018

commemorates HELUKABEL's 40th anniversary. We celebrate the occasion with an anniversary edition of our POWER magazine.

27

the number

of editions of our main catalogue "Cables, Wires and Accessories" that have been published. The original 20-page brochure now has an impressive 1,176 pages.

48
subsidiaries

in 29 countries enable us to operate in close proximity to our customers all over the world.



ABOUT THE AUTHOR

Angela Huber is head of customs documentation and an expert in the international shipment of goods.

IN CAMEROON WITH LAURENT GIMENEZ

Laurent Gimenez, Business Development Manager at HELUKABEL, is always on the go. He travels across the African continent to form partnerships and build new markets. We accompanied him for a day on one of his visits to Cameroon.

8:00 A.M.

Hotels are Laurent Gimenez' second home. They're part of the job. Today he's in Douala. With a population of 2.4 million, this port city is the largest city in the country. He's picked up on the dot by Stéphane (left) who drives him to the headquarters of CMI, a Cameroonian electrical wholesaler.



8:40 A.M.

CMI has been HELUKABEL's partner and representative for two years. With a staff of 35 and three subsidiaries in Douala, the company has primarily been selling generic cable to tradesmen.



9:15 A.M.

Laurent Gimenez presents new products to Colince Kemdeng (left), CMI's general manager. With information on latest cable developments and possible applications, as well as product training, he prepares the CMI staff for the sales floor.

10:45 A.M.

On the way to the new CMI warehouse, Gimenez passes numerous street vendors.



11:30 A.M.

The recently completed CMI warehouse only took a couple of months to build. A container from Hemmingen has been unloaded at the port and is awaiting to be picked up.



13:20 P.M.

There's plenty to talk about over lunch. Douala is also the industrial centre of the country. This means there are a lot of potential customers out there, and CMI wants to be the company to service them.



16:30 P.M.

Visiting a customer on the way back. Talks were promising. It's important for CMI customers to have personal contact with someone from HELUKABEL. This builds trust and paves the way for future business.



17:00 P.M.

One last cup of coffee before Laurent Gimenez makes his way to the airport. He'll be back at CMI in a couple of months for a meeting to train the entire staff.



"CABLES ARE MORE THAN JUST C-PARTS"

This year, HELUKABEL appointed Thomas Mann as its Chief Technology Officer (CTO). In this interview, he explains what fascinates him about his field, discusses development trends, and highlights the importance of in-depth testing.

Right from the start of your career you were involved with cables. What fascinates you about this product?

I find it exciting to work with something that most people aren't even aware of. It's not until you look closer that you realise how complex these components really are, and how much more important they are than typical C-parts. What I like about my job is the contact I have with both customers and staff. I get to hear about what's "bugging" our customers and can work on finding solutions to their problems – ok, maybe not as much hands-on stuff as before, but occasionally I do get the chance to look into the technical details.

Is every HELUKABEL development triggered by a customer request?

We don't just develop products for customers, we also investigate new principles and build component prototypes to equip ourselves for the future. Take optical transmission systems as an example. Apart from that, we do, of course, manufacture a lot of special cables for customers, in particular for industrial applications and machine construction.

What's the development process for such cables?

The customer usually wants the cable for a specific application, a machine that he's just developed for example. This is where our technical know-how comes to the forefront. We use information about bending radii, traverse paths, accelerations and velocities to design the cable and provide the customer with suggestions about how it could look. If he's satis-

fied with our recommendations, we start sample manufacturing followed by a zero series to see how the cable copes with series production conditions, and finally series production.

How important are simulations in this process?

We always use simulations before building a prototype. We have our own tools to find out how the product will look in real life. First, a simple computing tool creates a drawing of the cable to see if it's at all feasible. Then more complex programs are used to simulate screening properties, current capability and transmission properties.

How is a cable tested?

Our cables are thoroughly tested before being handed over to our customers. The tests are divided into two major categories. First, there are the standardized tests: alternate bending, roller bend and torsion tests. The bigger group, however, are the non-standardized tests. Here we test our cables in real-world conditions. Since a lot of our cables are used in machinery that use drag chains, we have invested in equipment with lengths varying from one to 40 metres (three to 131 feet) to be able to test them in simulated environments. We adjust the bending radii, traverse paths, accelerations and traverse speeds on the equipment to match those of the customer's specifications as closely as possible. Extensive testing comprising five million bending cycles over a long distance can take up to two years to complete.

What are the current trends in cable engineering and development?

A strong trend is the single cable solution. Here, the electrical power and feedback conductors are combined into a single cable. The advantage for customers is that they only need one cable and therefore only need one plug. This makes wiring the equipment even easier. Beside this, there are always customers wanting a cable capable of serving both torsion and drag chain applications. This is just not possible in many cases as each type of application requires its own type of cable. It's our job to give the right advice and explain why one cable for all is not recommended.

What are the limitations today regarding the development of new cables?

There are two aspects: the technical/physical and the regulatory. On the technical side, we aim to fulfil the customer's request to keep the cable as small and light as possible. In industry, pneumatic drives are often being replaced by electric drives which need power and

data. The cables shouldn't be bigger than the motors, of course. The real challenge here is to push a cable's abilities to their physical limits. Alongside this are the norm and regulatory limitations. Our goal is always to develop multi-norm compliant cables because machine construction, for example, is highly export-oriented with machines being used everywhere in the world. However, the norms focus on totally different aspects. In the USA it's extremely important that cables are non-flammable. That's true in Europe too, of course, but here halogen-free flame retardancy and electrical safety also play a large role. To simultaneously reconcile these aspects is challenging, to say the least.

"Extensive testing comprising five million bending cycles over a long distance can take up to two years to complete."

THOMAS MANN, CHIEF TECHNOLOGY OFFICER
AT HELUKABEL

How important is it to have the right staff to address these challenges?

Experience is the be all and end all in the field of custom cables. The topic of cables is only briefly touched on in college, which is why we have to expand the skills of our specialists. They learn how to make a cable through hands-on experience. We are well diversified at HELUKABEL with experts for materials, process engineering, communications engineering, power engineering, quality and the environment. From a mechanical, electrical and material engineering point of view, we have all of these aspects covered! Our technical expertise combined with good working relationships allow us to function well as a team. ■

THOMAS MANN

Thomas Mann has been working at HELUKABEL for seven years. He began his career in process engineering before becoming engineering and production divisional manager and, in 2013, technical plant manager at Windsbach. The qualified electrical engineer has been Chief Technology Officer (CTO) at HELUKABEL since the beginning of 2017. In addition, Mann is currently pursuing a part-time MBA.

WELCOME TO CANADA!

HELUKABEL Canada: customer proximity despite great distances.

Canada

Toronto

USA



HELUKABEL Canada is growing. The subsidiary moved to its new, larger premises in 2016.



In collaboration with his team, Alex Kanouni (left) supplies customers in the most far flung corners of Canada.

HELUKABEL Canada's team of ten are just one hour's drive away from the world famous Niagara Falls; or more precisely, in Mississauga in the centre of the "Greater Toronto Area" – one of North America's largest industrial centres. "Thanks to the first-rate infrastructure, we can reach every corner of Canada in one to two business days," points out managing director Alex Kanouni. An impressive feat for an area with nearly 10 million square metres – and an important competitive advantage which he and his team exploit. "HELUKABEL is becoming the leading cable supplier to the Canadian automation industry," reports Kanouni. Growing demand has already necessitated a move to a new headquarters that is double the size.

The close proximity of the subsidiaries in the USA and Mexico has its advantages too. All parties profit from the close cooperation – particularly the customers when it comes to product availability. Kanouni looks positively into the future: "Our wide product range, application know-how and manufacturing possibilities provide us with the necessary flexibility to solve even the most sophisticated tasks."

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ISLAND FEELING WITH CITY VIEW

Toronto has one of the longest urban lake shores in the world. In Alex Kanouni's opinion, a visit to the Toronto Islands is an absolute must: "You have a wonderful view of Ontario Lake itself as well as the Toronto skyline from the islands. Whether you want to lie on the beach, visit Gibraltar Point Lighthouse or Centreville Amusement Park, or just enjoy the good food at Toronto Island's barbecue terrace, the Toronto Islands are always worth making a detour for."



FACTS

0 Canadian dollars is what musicians have to pay for their train ticket if they're musically entertaining their fellow passengers as part of the "VIA Rail's Artists on Board Program".

A Lilliputian **24,3 square metres** is the size of the jail in Rodney, Ontario, making it the smallest in the world.

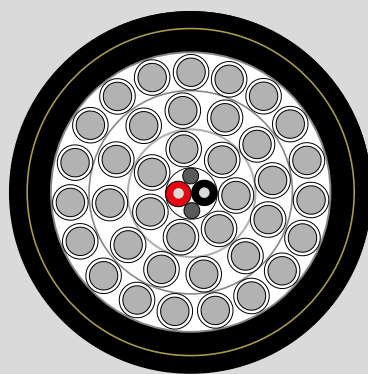
1.000.000 letters are delivered each year to Santa's address: H0 H0 H0, North Pole, Canada.

A SAFE PORT

WITH A SPREADER CABLE FOR CRANE SYSTEMS

WHEN CARGO SHIPS MEASURING UP TO 400 METRES

(1.312 feet) arrive in ports all over the world, things have to move quickly. Modern cranes load and unload these megaships and stack the containers on top of each other. A spreader cable connects the crane's lifting equipment with the spreader, which is a type of handling tool. A hybrid cable combines the power supply and control cores into a single cable. It guarantees high-speed, error-free data transmission to the terminal's IT building and controls the opening and closing/locking action of the spreader. The trailing cable is fixed to the top of the crane at a height of up to 70 metres (230 feet).



HIGH TENSILE STRENGTH

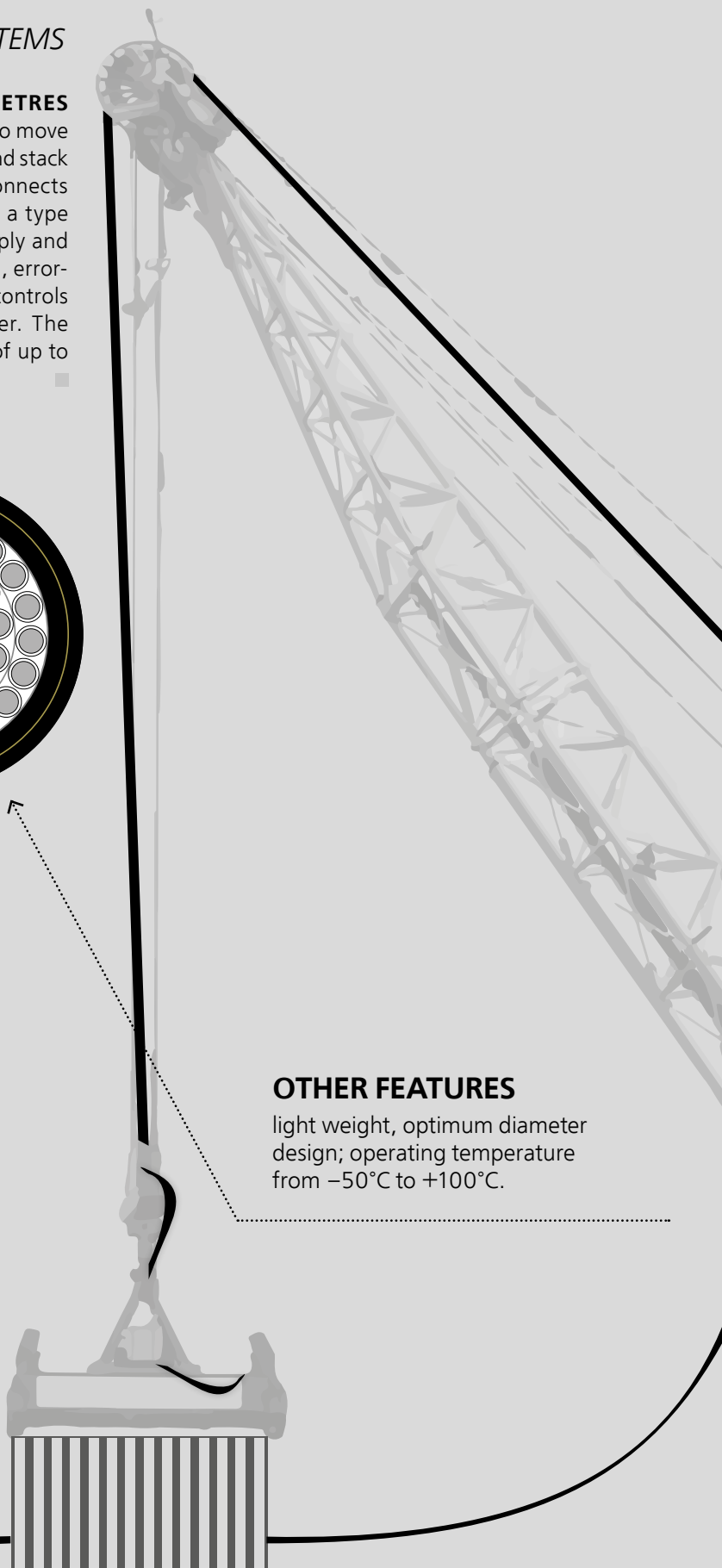
with minimal elongation due to LCP fibre braiding; halogen-free, flame retardant inner and outer sheath made from nick-, cut- and abrasion-resistant material.

RESISTANT TO

oxygen, UV radiation, ozone, oil, hydrolysis and salt water.

OTHER FEATURES

light weight, optimum diameter design; operating temperature from -50°C to $+100^{\circ}\text{C}$.





PIONEER

Jay Song is the man in China. His job is to make sure that the Taicang production facility stays on track.

The HELUKABEL plant near Shanghai started operations in 2013 and is the company's first plant outside of Europe. Jay Song joined the team as managing director in 2014. With pioneer spirit and a dedicated team, the 37-year-old has the new subsidiary firmly established in the Chinese and Asian-Pacific market. Jay Song's work focuses on process and production planning, as well as quality management. HELUKABEL's same quality assurances apply to every cable and wire regardless of whether they are manufactured in Germany or "made in China".

For Jay Song, regular information exchanges and coordination with German plant colleagues is the norm, as is using material and test equipment compliant with German standards. However, his focus is always on the customers. They not only benefit from fast response and delivery times, but also from personal contacts, such as Jay Song, who literally and figuratively speak their language, understand their needs, and are able to provide immediate custom-made solutions.