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Lapp Group Customer Magazine

Highlight at
SPS trade fair:
Seven at one stroke

ÖLFLEX® for
high-tech tyres
from Continental

State-of-the-art
logistics and
service centre
in Ludwigsburg

LAPP GROUP

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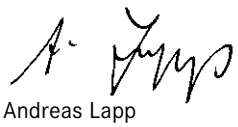
Ladies and Gentlemen,

The end of September brought a very successful business year to a close. We have achieved what we set out to do, even with an unfavourably high price of copper.

You have remained loyal to our company, have relied on our support as a strong partner. For this, I wish to thank you all most sincerely. We know that growth requires a joint effort. After all, your success is our success. For this reason, we will strive to continue supplying you with the perfect cable connections, with top-class quality, technical expertise and passion. You can take our word for it.

An important element of our success is our innovative thinking, seen in our current position as innovative partner to the renewable energies sector. We are delighted to see our traditional clients from the mechanical and plant engineering industry, as well as equipment manufacturing, recover so well from the crisis. They are, and remain, our most important customer groups. It is for them, and others, that we presented the new high-tech servo cable at the SPS/IPC/Drives trade fair. And that's not all: While others are busy heralding the social media revolution, we are creating technologies useful for the everyday. With Lapp Ideas, our new innovative platform, customers and employees can incorporate their own ideas into the product-making process. Facilitating a faster and more efficient response from us; meaning tailored solutions for you.

Looking forward to a continued collaboration with our partners,
With best regards,



Andreas Lapp

ÖLFLEX® for high-tech tyres from Continental

Car tyres are required to meet the highest of safety standards. They need to be able to cushion and absorb, to ensure directional stability, have smooth running characteristics and a long life, as well as be able to transmit power in longitudinal and transverse directions. Manufacturing such high-tech products is a core competence of Germany's Continental concern. With its headquarters in Hanover, the company is Europe's leading tyre manufacturer. One of the concern's largest production plants in Europe is located in Korbach in Hessen, where 34,000 car, SUV and van tyres are manufactured each day.

And for many of its production lines, Continental has placed its trust in the reliable cable and connection technology of Stuttgart's Lapp Group. For example with the "Internal mixer 8", launched in December of last year. Here, raw materials are mixed, rolled, cooled, mixed again and rolled; a process varied according to the type of tyre and component until the desired material property has been achieved. After all, such a high-tech tyre comprises more than 12 different rubber compounds. The internal mixer produces 60 to 90 tons of sheet daily as part of a multi-stage mixing procedure. These are the basic elements for every tyre.

The system stretches across four floors and is controlled by a single employee. The cable harnesses used are routed under the ceiling in cable trays. Responsible for the wiring was Bernd Emde from the

The rubber sheet cooling system. The rubber sheet is cooled in the lower level. Off to the packing station on the first floor via a return belt.

Electrical Installation department at Continental. "We used almost exclusively Lapp cables. We were particularly impressed by the high quality of Lapp's products, not to mention the superb service from a single source."

A feeding conveyor and several pipes or hoses transport the raw materials to the mixer. Safe transport using energy supply chains is guaranteed by the ÖLFLEX® FD CLASSIC 810 P cables. As oils are also mixed here, the highly oil-resistant ÖLFLEX® 191 connection and control cable is used. Next stop is the mixer, before the plastic material produced in the mixer continues on to the extruder. Using two extruder screws and a calender (rolling system), the extruder rolls out the sheet. This demands a particularly high performance, which is why the varied ÖLFLEX® CLASSIC 100 CY connection and control cable with a cross-section of 95 mm is used as a supply line for the extruder. Serving as a connection to the movable calender and also connected to the frequency converter is the ÖLFLEX® FD 90 CY drag chain cable with its tin-coated copper screen braiding.

A transition belt transports the sheet from the calender to the rubber sheet cooling system. The task of controlling the motors falls to the ÖLFLEX® CLASSIC 110 connection and control cables. The sensors and actuators are supplied by UNITRONIC® BUS PB FD PA cables. At the end, the belt "spits out" the accordion-shaped sheet. Before the finished sheet is released for further processing and finally used on the tyres, a quality check is carried out.

Feeding stage for the internal mixer: The rubber balls are transported here.

Samples are tested online and approved for further processing.

While we are on the subject: In order for Lapp to be able to process the orders from Continental faster and with less complication, all Lapp brand products will now be included in Continental's electronic catalogue CEOS (Continental Electronic Ordering System). Miguel Bouza-Behm, Sales Engineer at U.I. Lapp GmbH and Dejana Zarkovic from In-House Services will also be on hand to provide customer support. Thus relieving Continental's Purchasing department of its "middle man" duties in the future. ■

www.continental-corporation.com

Freeing up resources with LOS

Improvement ideas generated during group work

A further highlight at the press conference was the presentation of the Lapp Organisation System (LOS), a best-practice model based on the Kaizen methodology and developed especially for Lapp. In the space of two years, 16 production sites belonging to the Lapp Group around the world saw an approximately ten percent increase in productivity. Further five percent increases in efficiency are expected each year.

At U.I. Lapp GmbH, for example, assembly times have been reduced to such an extent that employees now have no trouble fitting in the smaller orders that once needed to be sent out to external service providers. One such example: For SKINTOP® assembly in Stuttgart, the time spent on commissioning each item was reduced from three minutes to thirty seconds thanks to placement of the parts in transparent and readily accessible double-decker containers.

In the Stuttgart plant where the EPIC® industrial connectors are manufactured, assembly preparation times were reduced from 10 minutes to one minute and product processing times cut from two weeks to two days. This has allowed for a quicker reaction from the company to customer requirements, has made it more flexible and has reduced stock. Delivery reliability has also seen an improvement, rising from approx. 70 percent to 95 percent.

At the cable plant in France's Forbach, machinery set-up times were reduced to allow for three extra hours of production line operation each day. This is the equivalent of 30 kilometres more cable on a daily basis. Dr. Thomas Maile, Head of the Supply Competence Centre: "With the lean methods, we were able to meet increasing demand without any addition to capacity."

The customers are also benefitting from LOS. Around 500 items are available immediately from Lapp, deliverable within 24 hours. The customer no longer needs to stock up on products and can thus reduce his working capital. This then frees up resources for other investments. ■

“Innovation takes courage”

Interview with Michael Collet,
Chief Technology Officer, Lapp Group

Michael Collet

How does Lapp value innovation?

For Lapp, innovation is vital to our success. Our customers expect us to have the latest solutions to the professional challenges they face.

How does Lapp promote innovative thinking?

First of all, it takes courage for a company to drive innovation. We can’t be afraid of making mistakes or coming up with unsuccessful ideas. It is perfectly normal for just one idea, out of ten or twelve, to be considered innovative. And creativity needs to be supported too. We provide our employees with additional incentives using competitions. Lapp Ideas, our innovative online platform, will also aim to incorporate our customers more closely into the innovation process.

Could you explain this “Lapp Ideas” for us? What lies behind this online platform?

Lapp Ideas is an online-based platform for innovative thinking. It is, in itself, an innovative idea; the first of its kind seen on our market. With it, we are offering our customers an easy and fast way to share ideas and ask questions, and to discuss these offerings with experts.

What do you hope to gain from Lapp Ideas?

We believe that there is a lots of creativity and expertise in the market. Lapp Ideas will allow us to better use those resources, and with a bit of luck, plenty of new products will result. It is also a case of reaching out to the customer. With today’s web technologies, we have the opportunity to communicate with customers faster and more directly.

How does the customer benefit from sharing his suggestions on the Lapp Ideas platform?

In an ideal situation, we will be able to quickly develop a solution to meet the customer’s requirements which, in turn, help the customer become more competitive. And, of course, good ideas are also rewarded! ■

A beta version of the Lapp Ideas innovation platform for german users will be launched on November 22nd. An international version is planned for January 2012. www.lappideas.com.


LAPP KABEL

High technology in the new Logistics and Service Centre

The new Logistics and Service Centre in Ludwigsburg is coming on in leaps and bounds with the keys officially handed over to U.I. Lapp GmbH just a few weeks ago. And now it's time for the interior fixtures. Kabelwelt spoke with Josef Holz, Managing Director of U.I. Lapp GmbH and now also the person in charge of the necessary infrastructural setup.

Josef Holz

What capacities are we talking about here?

We have three halls with a storage space of 30,000 m² for a good 120,000 cable drums, as well as 1,600 m² of office space. 30 truck ramps are ready for incoming and outgoing deliveries. This will be one of the most modern logistics and service centres in the industry. The reason for our investment of over €40 million.

What is so special about this new centre?

In halls 1 and 2, almost all the processes will be automated. The drums are carried on driverless transport systems (known as FTS) to 26 machines for sizing. That really is a quantum leap for Lapp logistics.

How are the halls divided up?

In hall 1 is our service area with trimming and commissioning. Hall 2 has a fully automatic high-bay rack system. The automatic elevating transfer vehicles (ETVs) can store and remove up to 75,000 cable drums up to 80cm in diameter. Transportation is carried out by a robust roller conveyor system with a new handling apparatus for the operators. In hall 3, the larger drum sizes are stored in what is known as a Very Narrow Aisle (VNA) warehouse system, with special forklifts.

When will it all kick off?

We're moving in next April and then the official launch will take place in June.

What does this mean for the other logistics sites?

As soon as the new centre officially opens, the warehouses in Freiberg and Kornwestheim will close. All employees will be moved to the new location in Ludwigsburg. Our logistics centres in Stuttgart, Hanover and Forbach will remain operational.

How energy-efficient is the new building?

The centre was naturally built according to the latest energy-efficiency guidelines. We are installing a large photovoltaic system on the roof with 400 crystalline silicon modules and an annual output of 1 MW, enough to supply 285 households with electricity. And to emphasise our commitment to electromobility in Ludwigsburg, there will be 10 electricity filling stations set up in front of the hall. ■

LAPP HELIX – World premiere for electric vehicles

In July, more than 50 technical journalists from Germany, the Czech Republic, Austria, Belgium, the Netherlands and Switzerland took part in the two-day annual trade press conference organised by Lapp Kabel. One particular highlight was the theme of e-mobility and the presentation of a world premiere for electric cars: the patented charging system LAPP HELIX.

As Siegbert Lapp explains: "Our patented charging solution is both simple and ingenious. In contrast to a coiled charging cable, our LAPP HELIX rolls up like a snail that emerges from its shell searching for food and, when it's finished eating, retreats back into to its shell." At the same time, the innovative solution from Lapp brings with it considerable advantages in terms of weight, costs and space requirements. This means clear competitive advantages for the new electric and hybrid vehicles.

Advantages of the LAPP HELIX

- This "snail-shaped" design saves an enormous amount of space. In comparison to a coiled charging cable, the LAPP HELIX requires approximately 60 percent less space. The advantage for the industry lies in the additional opportunities for integration into vehicle design. For example, apart from the boot, the LAPP HELIX can be stored in the door panels or the

The LAPP HELIX can, for example, be practically stored behind the seats.

boot lid. Even if a charging station is to be equipped with a permanently installed charging system, the LAPP HELIX can be stowed under a flap without any further protection.

- Since the cable only requires half the amount of material like the coiled variety, LAPP HELIX is also lighter: with a weight saving of approximately 40%. The reduced weight directly contributes to an increased operating range for the vehicle.
- And, of course, less material means lower costs. The saving for the manufacturer is approximately 25%.
- Furthermore, the end consumer benefits from the reduced weight. It makes the charging cable easier and lighter to handle.

After charging, the LAPP HELIX returns to its coiled position thanks to its “shape memory”, meaning it can be cleanly stowed away.

Here, Lapp has developed an innovative production technology so that the charging cable can be coiled horizontally. The restoring force, responsible for automatically returning the cable to its initial position after charging, is less than that for standard coiled cables, thus reducing the impact on the connector.

The components used for the LAPP HELIX are based on the current LAPP CHARGE charging system. The cable is halogen-free, flame-retardant, oil-resistant and suitable for use in temperatures ranging from -40°C to 90°C. This makes it perfect for use in harsh conditions. The design and colour scheme can, as with the LAPP CHARGE, be adapted to the customer's needs, for instance by adding the manufacturer’s logo to the vehicle. For the charging plug, Lapp recommends the connector which has been developed together with cooperation partner Bals Elektrotechnik in accordance with VDE standards. Of course, the LAPP HELIX can also be used with connector types currently on the market.

Siegbert Lapp at the signing of the cooperation agreement with Wolfgang Bals

Another highlight was the signing ceremony of the cooperation agreement with Bals Elektrotechnik by Siegbert Lapp and Wolfgang Bals. Our “eMobility” EV charging system LAPP CHARGE was developed and launched together with Bals. ■

EPIC® connection technology for flexible solar cells

Lapp Kabel, together with Konarka Technologies, garnered a great deal of attention at the European solar power conference, EU PV SEC, in Hamburg. Here, the manufacturer of organic solar cells presented its "Power Plastic Module". The solar cells are printed on flexible film and are perfectly suited to, for example, an integration into buildings. For collection of the electricity, Lapp has developed the new EPIC® SOLAR MAP connection box, recently unveiled at the Intersolar trade fair. Production of the connection box and its attachment to the Power Plastic modules are automated processes.

With the organic technology, a dye emits electrons and the flow of current takes place as part of an electrochemical reaction. "Our product is a green one and fully recyclable," explains Alexander Valenzuela, Konarkas Vice President for Business Development in Europe. This is because the organic cells, in contrast to more conventional modules, can be processed at low temperatures, thus saving energy and conserving resources. The manufacturing process from Konarka involves, as with news-papers, what is known as roll-to-roll processing. The modules are thin, lightweight and flexible, and are not only integrated into glass and construction materials but also shade-providing structures, film and textiles.

Thomas Holzbaur and Howard Berke from the company Konarka present the flexible "Power Plastic Module" with EPIC® connection technology

Even semi-transparency, arbitrary colours and colour mixtures are possible. Because the solar cells also tolerate unfavourable angles of insolation and shading, they are perfectly suited to integration into buildings. Guido Ege, Head of System Products at Lapp Kabel: "Konarka is an innovative company with enormous growth potential. Both companies have the ingredients for a successful partnership." The first pilot projects are soon to get underway.

As a technology market leader in this sector, Konarka Technologies has been developing and producing organic solar cells since 2001. At the core of this technology is a photoreactive polymer, developed by Konarka co-founder and Nobel laureate Dr. Alan Heeger. The company holds more than 350 patents and employs around 110 employees at its headquarters in Lowell, Massachusetts (USA), as well as subsidiaries in New Bedford (Massachusetts), Nuremberg (Germany) and Linz (Austria). ■

www.konarka.com

Seven at a stroke at SPS

The innovative ÖLFLEX® SERVO FD 796 CP will be one of the highlights presented by the Lapp Group at the SPS/IPC/DRIVES 2011 trade fair (Hall 6, Stand 350). According to the motto "Seven at a stroke", the new motor cable replaces seven previous ÖLFLEX® servo cables in one go, bringing plenty of additional benefits to users. It firmly establishes the Stuttgart-based Lapp Group in the Champions League of international servo cable manufacturers.

Frequent changes of position is where the new premium cable shows its excellence, in energy supply chains with an acceleration of up to 50m/s², at speeds of up to 5m/s and travel distances up to 3m. "This makes it considerably faster and more efficient than previous drag chain cables," explains Product Manager Volker Huber. Furthermore, the proportional run-up and braking times have been reduced by up to 96%. In short, the new premium cable saves time and increases productivity, offers an exceptionally long service life and is compact and lightweight.

Despite the improved performance, in terms of price the new ÖLFLEX® SERVO FD 796 CP is at the same level as previous ÖLFLEX® servo cables it replaces. The customer also benefits from easier ordering and more efficient warehousing.

The new premium cable was developed by Lapp in Stuttgart. Thanks to a low capacitance polyolefin insulation, it offers lower EM-effective leakage currents while simultaneously providing extremely high dielectric and electrical strength. It is halogen-free and flame-retardant and has all of the key certifications, including UL-AWM, CSA AWM and VDE. As required, the servo cable also comes with additionally shielded signal circuits for monitoring the temperature of the electric motor or an electromagnetic brake.

The new ÖLFLEX® SERVO FD 796 CP is manufactured at the cable plant in Stuttgart. To permanently guarantee the required quality standards, Lapp has invested in a new drag chain cable testing facility at its in-house test centre. Here, cables can be subjected to extremely high dynamic alternate bending loads. In the new testing facility, travel speeds of up to 10 m/s and accelerations of up to 100m/s² are possible. ■

Copes with extreme acceleration: The ÖLFLEX® SERVO FD 796 CP

Global News

Andreas Lapp with guests at the opening

3,000 visitors at the Indian film festival

The Indian film festival "Bollywood and beyond" was held in Stuttgart for the eighth year running. Significant support is given to the festival by Andreas Lapp in his function as honorary consul for India in Baden-Württemberg and Rhineland-Palatinate. This year, the thematically diverse films about life on the Indian sub-continent attracted more than 3,000 visitors. It was a complete success!

Celebrations for five companies

There was reason to celebrate over the summer for five companies within the Lapp Group: Câbleries Lapp in Forbach (France) celebrated its 20 year anniversary with around 400 guests. There were big celebrations in the Swiss town of Diessenhofen for the opening of the new 1,200m² extension of the injection moulding plant. At Lapp Mexico, there was a staff celebration organised to mark 15 years of the company. A traditional Pooja ceremony was held to mark the 13th anniversary of the company at Lapp India and in the Hanover subsidiary, a big summer party was organised for the company's 25th anniversary.

Lapp support for WAVE Tour

"We consider sustainability and innovation as standard," explains Michael Collet, Managing Director of the Competence Center Innovation at U.I. Lapp GmbH. Which is why Lapp, together with its cooperation partner, the Leutkirch-based FPE Fischer (manufacturer of the internationally patented aluminium connection boxes for photovoltaic modules), supported the team "Sustainable City of Leutkirch in Allgäu". The team was one of 20 taking part in the WAVE2011 Tour. For two whole weeks in September, emission-free vehicles descended on 30 European cities to draw attention to the uses and everyday suitability of alternative drives. The vehicle for the Leutkircher team was a Mitsubishi i-Miev, the world's first mass-produced electric car.

www.wave2011.net

More commercial/technical skilled trades

The Lapp Group is strengthening its commitment to education. This year, 24 young people started their careers at Lapp, nine more than the previous year. Lapp has strengthened its commitment to commercial/technical trades and has set up a new workshop, approved by the Chamber of Industry and Commerce, where budding mechatronic engineers, machine and plant operators receive training with a focus on metal and plastics technology. Also included here are the classic professions of warehouse logistics specialists, warehouse staff, IT specialists, industrial administrators and business employees in wholesale and export. In cooperation with the Baden-Württemberg Cooperative State University, students of Business Studies and Trade, Business Studies and Service Management, Industrial Engineering and Business Informatics will also take part in the training. Altogether, there are currently 59 young people completing an apprenticeship at Lapp.

Lapp Group apprentices at the Apprentice and Student Day 2011

Top grades for the "e-shop"

The "e-shop" from Lapp Kabel has not only been awarded the Trusted Shops quality seal but has also achieved the best possible customer rating ("very good"). More than 1,000 "e-shop" users participated in the survey and every third participant even wrote an additional comment. Typical examples were: "Very fast service - as always", "Will not hesitate to recommend" or "Super service". Reviews and comments can be read in the "e-shop" at www.lappkabel.de.

Trade fairs 2011/2012

FMB

Shanghai, China 9. – 11.11.2011

SPS/IPC/DRIVES

Nuremberg, Germany 22. – 24.11.2011

ELECTRICAL ENGINEERING

Krasnoyarsk, Russia 22. – 24.11.2011

IMA Nantes

Nantes, France 6. – 7.12.2011

ELECRAMA

Mumbai, India 18. – 22.1.2012

All of the Lapp Group's trade fairs can be found at www.lappkabel.de/messen

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