

# LÜTZE-REPORT

The international magazine of the Lütze Group

MISSION (IM)POSSIBLE  
STUDER GRINDING SYSTEMS  
AUTOMATION TOUR 2011  
SPANGLER BENEFITS FROM  
THE LSC WIRING SYSTEM  
GIANT MACHINE IN RECORD TIME  
ALL-ROUND TALENT  
LÜTZE TWITTERS AND POSTS  
NEW MANAGING DIRECTOR  
AT LÜTZE  
SURVIVOR  
EXCELLENT FRAME  
CONCEPT WITH LSC  
CAUTION - SLIPPERY  
WHEN WET!



# e d i t o r i a l

## EDITORIAL



Udo Lütze  
CEO Friedrich Lütze  
International Group

### Creating Value from Sustainability

Many of our customers are recognised industry leaders and for a good reason. They are innovative companies that market products that fulfil far more than just their warranty requirements. This is precisely the point where we feel we are responsible for investing in the sustainability of our products and solutions.

It is often the little things that make all the difference. Whether it be selecting the right product or efficiently planning the logistics: We see every customer as an individual partner whose sustainability efforts we support. This is how we create values that contribute to the quality of our customers' products.

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With kind regards,  
Udo Lütze

**SkyBLUE**  
LÜTZE



Additional information concerning the SkyBlue sustainability campaign from LÜTZE is available on the Internet at: [www.luetze.de](http://www.luetze.de) or at the following direct link: <http://bit.ly/t7U1LX>



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# Mission (im)possible

Robert Fearnett, LÜTZE UK

## Reduce Costs and Create Added Value... Impossible or Not?

**Cost reductions and shorter lead times: probably the two most talked about issues for any supplier in the manufacturing industry. No one wants to stock large amounts of components and the extremely harsh competitive environment is squeezing prices tightly for all suppliers - including LÜTZE UK.**

Suppliers who want to stay one step ahead need to offer good value whilst helping customers reduce their overall costs. This is the approach that LÜTZE UK has taken with a number of its customers and is providing significant benefits to all concerned.

As a European manufacturer, LÜTZE UK regularly accepts large stocks of cable and automation products at its central warehouse in Tamworth sent from the parent company in Germany. This enables us to ensure next day delivery for a wide product spectrum from control cables, field bus cables, to servo and robotic cabling. LÜTZE UK goes far beyond the usual service standards provided by comparable companies. Significant investments have been made in accurate measuring and cutting equipment: precise cutting of cables to within a 5 mm tolerance on the overall length can be ensured when required. All items are cut exactly to length, rolled up, labelled and put together into kits. The added value for the customer: reduced goods-in checking and QA costs plus shorter production cycles.

LÜTZE UK can thus reduce unnecessary stock, shorten pre-production time and prevent cable cutting errors. Cut lengths are immediately labelled with details relevant to the end customer (for example, kit number, production cell reference or in-house part number). This makes it easier for customers to process them on site. In addition, end-of-reel waste which is typical for standard length reels is completely eliminated. This also helps to reduce production costs.

Assisted by accurate systems that produce customised e-mail reports covering stocks, orders and delivery schedules, LÜTZE UK can provide a complete solution. This reduces costs for our customers whilst providing a significantly improved service. This is exactly what is expected of a supply partner in today's environment.

This service not only leverages benefits for machine and control panel manufacturers but also for cable installation companies. The rolled and labelled cable lengths can be sent directly for assembly to the production facilities. The cables don't even need unrolling as for this type of customer the open ends are left available ready for processing.

This completes the proof that cost savings AND value-added supplier service do not have to be in opposition when you have LÜTZE as a partner.





# Studer Grinding Systems with LÜTZE SUPERFLEX®

Bernhard Frutiger, Fritz Studer AG, Thun, Switzerland and Patrick Büsser, LÜTZE AG, Siebnen, Switzerland

Based in the picturesque surroundings of Thun in the Bernese Oberland region of Switzerland, Fritz Studer AG produces cylindrical grinding systems. The systems are used for a wide variety of applications and the company meets the sophisticated demands of industrial customers including the Swiss watch-making industry, automotive manufacturers, manufacturers of pumps, turbines and transmissions as well as metering equipment producers. Studer grinding systems are used to grind both glass and ceramics as well as a variety of different metals.

Studer expects that all the components fulfil the strict standards under special grinding process conditions. An extremely important aspect is the stability of plastics when exposed to the cooling lubricants used when grinding. This is important since the closed system housings permanently contain a thick fog of cooling lubricants. This places extremely demanding chemical requirements on the hoses and seals as well as the cables.

Studer subjects all of the cables and plastic parts it uses to extensive tests. These tests involve storing the components at excessive temperatures in suitable storage media over months at a time and then testing their properties. The parts are only released for

production once it is ensured that the change in the part's behaviour remains "statistically unchanged", i.e. within the single-digit percentage range.

The wide range of materials presents an additional challenge. Based on Studer's experience, modern water-soluble synthetic cooling lubricants are particularly aggressive. The increasingly used organic-oil based materials also damage many of the traditional plastics.

Based on their years of expertise in this field and the innumerable tests, Studer is not just a machine supplier for customers but also

an excellent adviser when selecting the right cooling lubricant. The systems including all their parts as well as tools and resources are optimised to the intended use.

Studer has been deploying the high-quality LÜTZE SUPERFLEX® C-track cables for many years. The experience has been extremely positive with these cables comprising an insulation made from lubricating special TPE and a polyurethane outer jacket. The cable specialists at LÜTZE work in close cooperation with the Studer engineers in order to effectively meet the latest developments of the cooling lubricant industry.



*Pins, axles, sockets, nozzles and other parts are manufactured on Studer cylindrical grinding machines.*



*Besides metals, Studer cylindrical grinding machines also process a wide range of ceramic materials.*





# Automation Tour 2011

- Rich Vinnece, LÜTZE USA

Automation Solutions are on the move at LÜTZE's Michigan Distributor HH Barnum.



Automation component solutions continue to expand rapidly with new products every year. However, it is becoming increasingly more difficult for end users to allocate time for new product assessment. LÜTZE's Michigan, USA distributor HH Barnum is meeting this challenge by taking their new products to the end users via their "Automation Tour 2011".

The Automation Tour 2011 features a 38 foot climate controlled trailer which is towed by a GMC 2500H truck. The trailer includes twelve automation suppliers who have a key partnership with HH Barnum including LÜTZE Inc. The value for the truck, trailer and suppliers' on-board

equipment is estimated to be \$350,000. Each automation partner has a working display of their various automation products and services. LÜTZE's display features our new A216 DRIVEFLEX™ Variable Frequency Drive cable, C-track cables, a variety of Power Supplies and Ethernet modules, LOCC Box circuit protection and LSC automation solutions. The LSC frame has both Rockwell and Siemens controllers mounted in it, which actively control all the displays in the trailer plus LÜTZE provides the DC 24 V power for the displays with our DC 24 V compact switch power supplies.

The Automation Tour 2011 travels three days per week from mid Spring to Mid

Fall throughout Michigan, Northern Indiana and Northern Ohio. Generally the Tour stops at three to four OEMs and/or end users per day. The Tour always is manned by at least one Barnum Technical Support person, a Barnum Product Manager, the Barnum Account Representative responsible for the OEM/end user along with several supplier representatives who provide their high level of technical support as well. Not only can the end user learn about new products, but they are able to experience hands on solutions for their special projects.

HH Barnum estimates that five to seven thousand engineers and technical specialists will experience the Automation Tour 2011. This is the second year for the tour and by all accounts, the Automation Tour 2011 guests appreciate the value of the on-board expertise and product displays that HH Barnum bring to their place of business. LÜTZE values the partnership with HH Barnum's "Automation Tour 2011" and is looking forward to HH Barnum's "Automation Tour 2012".



# SPANGLER Benefits from the LSC Wiring System

- Tina Lambert, SPANGLER GMBH

SPANGLER is the specialist for developing automation solutions for different sectors and industries based throughout the world. The medium-sized family company based in the town of Töging in the Altmühltal region of Bavaria currently employs 114 workers and has been a reliable partner of the international machine and plant engineering industry for the last 30 years. More than 50 % of the systems produced by SPANGLER are exported. Customers from a variety of industries including environmental technology, agriculture, construction, automobile, raw materials and the pharmaceutical industry rely on the

complex challenges of their customers: one example is a customer from the automotive industry for whom the company manufactured a total of eleven floor-standing cabinets with the help of the LSC wiring system from LÜTZE.

"One special feature of the LSC wiring system is that the cables are not routed through a cable duct but are fixed in wiring strips and are routed at the back of the frame using brackets", explains Josef Mauderer, Head of the Technology Department at SPANGLER. He describes this type of cable routing as efficient and is relieved that it is not ne-

tem functions. The wiring of the new system was completed in a matter of no time.

Helmut Graspointner, CEO of SPANGLER: "I was left with an excellent impression of the LÜTZE LSC wiring system".

The LÜTZE LSC wiring system was implemented on a project of the vehicle manufacturer Volkswagen Commercial Vehicles in Hanover. The required switch and control system comprising 11 enclosure fields was installed, wired, tested and shipped within 3 weeks.



Photo credit: SPANGLER GMBH

quality of SPANGLER Automation. Successful project examples include the control management systems for grain drying systems in Rumania, water treatment facilities in the United Arab Emirates or food production plants in Germany.

All of these projects share the common feature of the engineering expertise of SPANGLER employees. They are constantly developing solutions to meet the

necessary during planning to consider the cable ducts, their efficiency and the associated heat emission levels.

The Production Manager at SPANGLER, Martin Neumaier, explains "Instead of the standard assembly panel, we used a modularly designed LÜTZE LSC frame". Prior to production start, the relevant employees at SPANGLER were trained by a LÜTZE representative in how the LSC wiring sys-

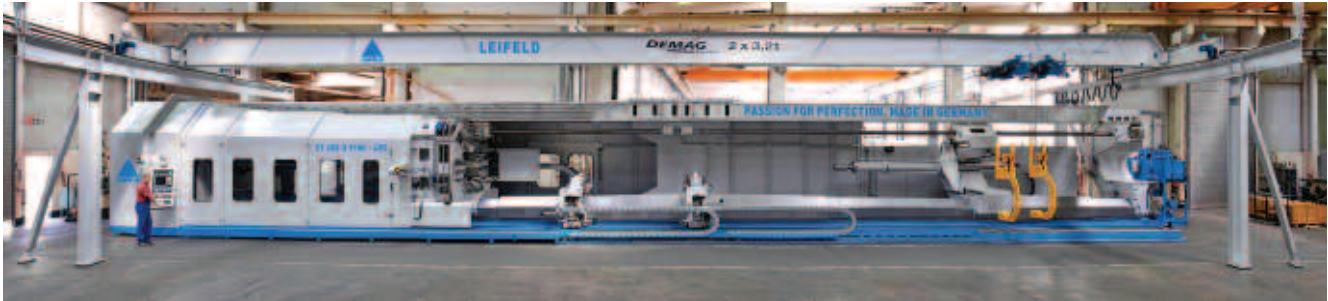
The switch system is used to automate an unloading magazine that transports either the painted hollow bodies of the Porsche Panamera or the Amarok Pickup (that will also be produced at the plant in Hanover from mid-2012) from the cavity sealing process to either the railway loading point or to the assembly line.



# Giant Machine in Record Time

Steffen Friedrich, LÜTZE Germany

## Rapid LÜTZE solutions for longest gear-forming spinning machine in the World



After submitting a quotation, the machine tool manufacturer Leifeld emerged as the winner of an international invitation to tender to build the World's largest gear-forming spinning machine. The 30-metre long giant weighing 200 tonnes had to be designed and constructed under enormous time pressure – with installation technology and cable assemblies from LÜTZE.

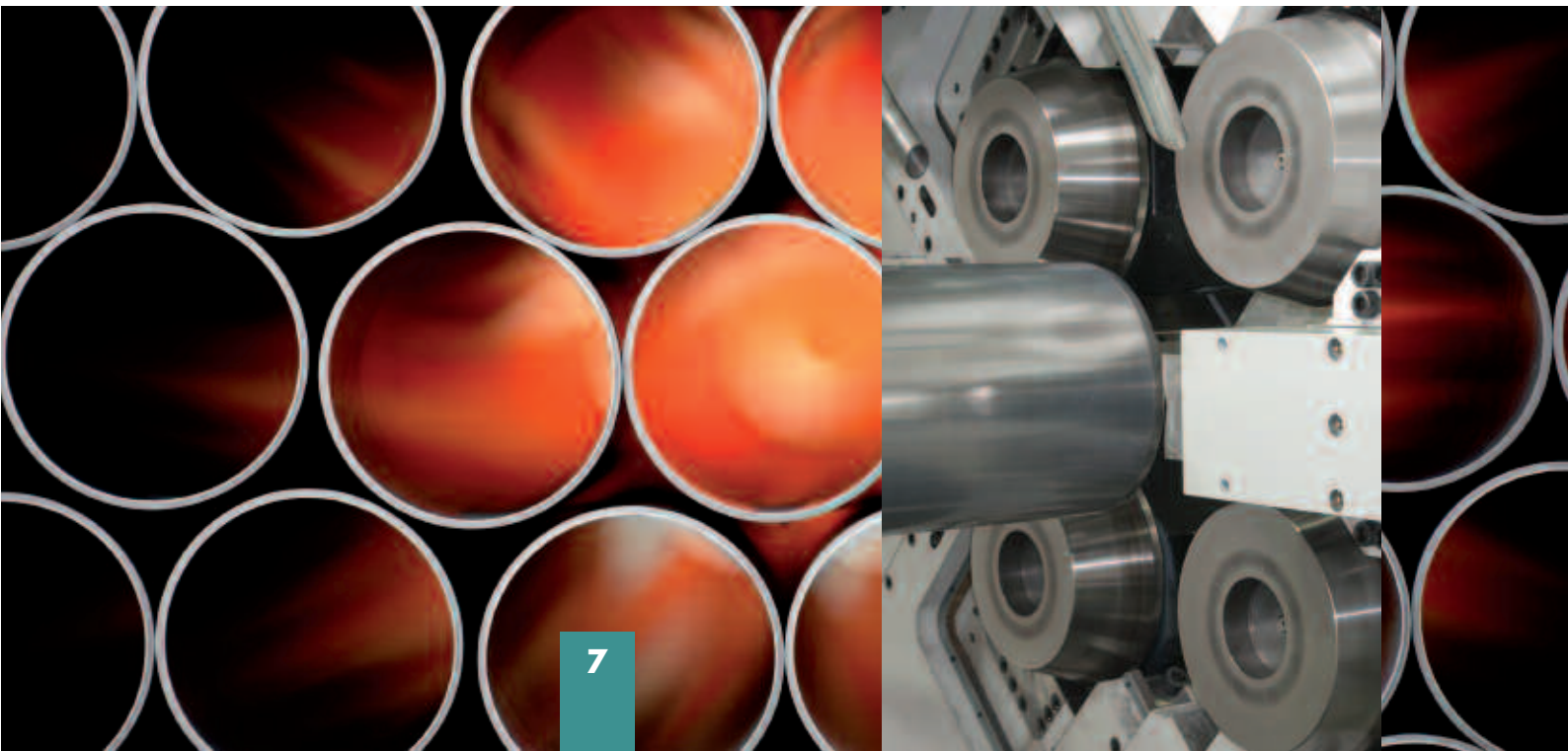
The sheer size and magnitude of this machine alone is impressive. However what is even more remarkable: This traditional company specialising in chipless metal forming has managed for the first time to flow form tubes measuring more than 15 m in length. (For those interested in the details: up to 9 m using forward flow forming and 15 m and more using reverse flow forming).

This ultra-modern stretch-forming spinning machine was commissioned by a subsidiary of a large Chinese corporate group – and the entire project had an extremely tight deadline of just ten months. Leifeld Metal Spinning AG and its suppliers were under a great deal of pressure to perform. To manage this Herculean task, Leifeld's engineers developed new strategies, concepts and detailed solutions.

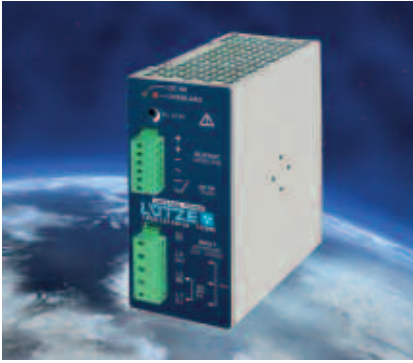
Major suppliers were closely involved right from the start. This included LÜTZE who supplied Leifeld with installation technology and cable assemblies within the extremely tight planning and installation timeframe. LÜTZE also displayed the expected competence in developing innovative customised solutions and meeting exceptionally short delivery times as required when supplying accessories.

"How long should the cable be?" The answer to this question was not always available at certain stages during construction. In this case, LÜTZE responded with the intelligent and pragmatic solution of fitting just one end of the cable with connectors – the connectors for the other end were left in plastic bags and sent with the cables. Leifeld fitted a total of four different types of LÜTZE products into this giant machine: besides cables and cable assemblies, a power supply unit and the LOCC-Box power monitoring system are also onboard.

The Demag Cranes & Components company was another partner working on this project. An overhead crane with a 9.4 metre long track was installed to safely handle the long tubes. It carefully and precisely unloads the transported goods on the machine – this also uses cabling from LÜTZE.



## All-round Talent with 240 Watt Power



LÜTZE has extended its successful Compact Power Supply Unit family to include a primary 240 Watt voltage supply that can alternatively be used in 1, 2 or 3-phase operation. A classic all-rounder for the control cabinet. Despite 240 Watts of power, the LÜTZE engineers have squeezed all the technical features into an overall width of just 55 mm. High-performance wiring systems can still be integrated into the restricted space available in the control cabinet. LÜTZE offers the new

240 watt power supply unit with a wide-range input of AC 187-550V and DC 250-725V.

One of the plus points of the new 240 Watt LÜTZE power supply unit is that it can handle overload currents of up to 150 %. The power supply unit starts even under difficult loads. In addition, the LÜTZE power supply unit is configured with a ready-on relay that reacts in the event of a power failure or reset.

On the output side, the power supply unit can be set to a maximum of DC 24 Volt. The high rate of efficiency of over 90 %, the minimum power loss and warm-up are also features worth mentioning.

The new LÜTZE 240 watt power supply possesses various national and international approvals from UL and CE. Among others: UL 508, IEC 60950, EN 60950, EN 61000-6-2(2005), EN 61000-6-4(2007), EN 61000-4-2/3/4/5/6/11, EN 61000-5-5

## LÜTZE twitters and posts

LÜTZE has been active on Facebook, Twitter, Google+ and YouTube for some time. This means that LÜTZE is continually expanding its online communication. Enter into a dialogue with LÜTZE and get the latest information, videos and feeds about products, experience reports, application stories, etc. etc....



## New managing director at LÜTZE



### Norbert Gemmeke takes over from Fritz Vögele as managing director of LÜTZE Germany.

With effect from July 2011 Norbert Gemmeke has been appointed managing director of LÜTZE Germany, based in Weinstadt. He is taking over from Fritz Vögele, who is taking a well deserved retirement after a successful career at LÜTZE spanning many years.

Norbert Gemmeke is assuming worldwide responsibility for the product, lifecycle and supply chain management areas at LÜTZE and brings with him extensive experience of

industrial automation. Norbert Gemmeke was previously in overall charge of fieldbus development at Weidmüller und Moeller. Latterly he was managing director at MT ElectroniX and Head of Business Unit Automation Systems at Turck.

Moreover, in the course of further international orientation, Friedrich Lütze GmbH & Co. KG has changed the form and the name of the corporation; the new name is Friedrich Lütze GmbH.

## Exhibitions 2012



Exhibition	Place	Country	Date
AUTOMATION Schweiz	Winterthur	CH	25.-26.01.2012
Paris Expo Porte de Versailles	Paris	F	01.-02.02.2012
AMPER	Brünn	CZ	20.-23.03.2012
Drives & Controls 2012	Birmingham	GB	17.-19.04.2012
Hannover Messe	Hannover	D	23.-27.04.2012
ATX South	Charlotte	USA	02.-03.05.2012
InnoTrans 2012	Berlin	D	18.-21.09.2012
MOTEK	Stuttgart	D	08.-11.10.2012
MATELEC	Madrid	ES	23.-26.10.2012
SPS/IPC/DRIVES	Nürnberg	D	27.-29.11.2012



## Flexible, versatile and reliable

The automation specialist LÜTZE, Weinstadt, is introducing the highly flexible Ethernet bus cable Cat. 6 SUPERFLEX® for cable carrier applications.

The life of an Ethernet cable used in a power cable carrier is "brutal". Rapid death of the cable is frequently pre-programmed. Its no wonder: Use in cable carriers is characterised by the highest mechanical loads in terms of bending and moving in tight radii, while long travel distances, high speeds and acceleration have frequently shortened the life of many such cables significantly. For this reason, LÜTZE has developed a cable specifically engineered for cable carrier applications: The LÜTZE SUPERFLEX® ETHERNET BUS(C)PUR (4x2xAWG26). This LÜTZE Cat. 6 cable for cable carrier applications is designed for about 1 million bending cycles at a speed of up to 4 m/s. It easily handles a maximum acceleration of up to 4 m/s² and a travel distance of 10 metres. The LÜTZE cable withstands a tensile force of up to 100 N without difficulty at the minimum possible bending radius of 7.5 x D. (D = outside diameter of the cable). The material is manufactured from halogen-free and flame-retardant PU with an overall diameter of about 7.8 mm. LÜTZE SUPERFLEX® can be used in cable carriers over a temperature range of - 30 °C to + 70 °C.

The LÜTZE SUPERFLEX® contains a central cross-shaped profile that imparts high internal stability to the entire cable structure. The technical challenge here was to find a material for the cross-shaped profile that, on the one hand, had minimal effect on the reverse bending, while on the other hand still provided stability to the conductor pairs and entire cable structure.



## LÜTZE INTERNATIONAL

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# Excellent Frame Concept with LSC

Raphael Rossi, LÜTZE France

## What started with a streamlined control cabinet solution progressed into a close partnership

**Every engineer's dream is to make machines and mobile equipment more compact. LÜTZE found a solution for a French mechanical engineering company – the start of a beautiful friendship.**

Arras Maxei is a mechanical engineering company based in the North of France. For over 60 years, the company has been a competent partner and supplier to manufacturers of transformers and electrical motors. Part of the company's work involves building mobile and stationary machines used for refining dielectric oils. As the properties of oil deteriorate over time due to exposure to oxygen, humidity and other impurities, this can result in damage such as the combustion of a transformer.

Thanks to years of experience, the engineers know precisely the mechanical, thermal and thermodynamic processes in transformers and electric motors. This competence is reflected in the impregnating, drying or polymerising machines and equip-

ment and in the vacuum furnaces and furnaces at Arras Maxei.

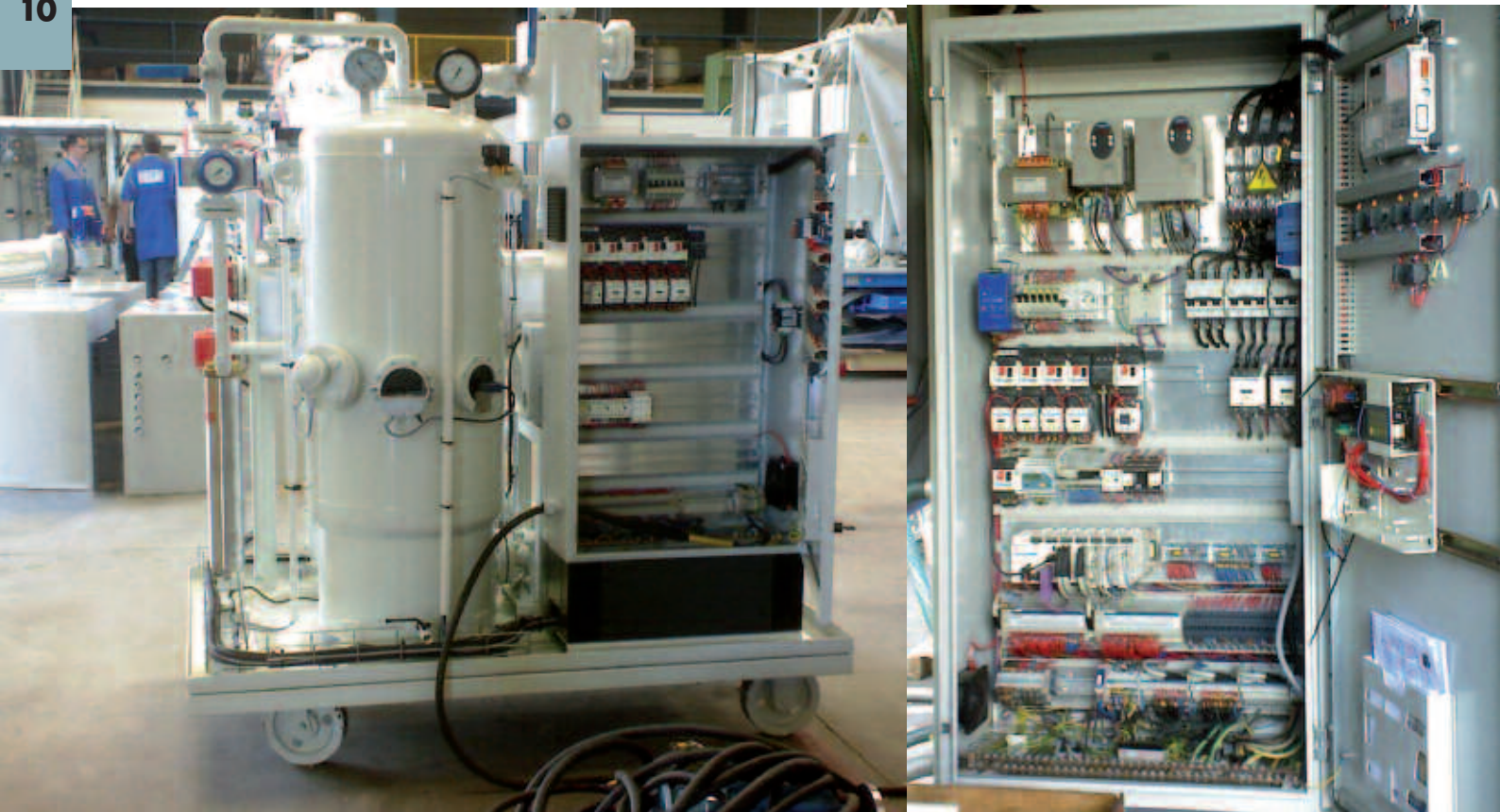
LÜTZE and Arras Maxei have been working together for the last four years. In the beginning, the French exclusively used converters and power supply units from LÜTZE in their machines. The two companies then analysed the exact requirements of Arras Maxei and found potential to optimise the design of their machines. The problem of restricted space especially meant the use of mobile equipment.

Thanks to the compact LSC frame, the control cabinets could be installed inside the machine frames instead of next to them. The machines could therefore feature a more compact and mobile design than was previously the case.

The LSC frames also deliver far more flexibility and reserves. Four specific LSC standard configurations cover all the machine categories and applications of this

French company. Today, approximately 70 machines fitted with LSC frames leave the factory each year. A satisfying success owed in part to the proximity and competent solutions of LÜTZE SAS France as well as the excellent relationship between the planning and design offices in Arras and Weinstadt.

A close and mutual partnership has gradually developed between the two companies. They can tackle the different installation problems together as a team. Products from the LÜTZE range always provide solutions to these problems, such as the M12 connector technology, valve connectors, power supply units, relays or converters. LÜTZE was also recently contacted about industrial cables – a friendship that lasts.





# Caution - Slippery When Wet!

Andreas Schindler, LÜTZE Germany

NOWE GmbH, a company of the "Faiveley Transport Group", delivers innovative and reliable sand scattering systems that are modular in construction and specially designed to customer requirements. LÜTZE components ensure a precise metering of sand quantities and guarantee safe operation even at low temperatures.

wasting energy, it also causes excessive wear of the wheels or tracks. To create the required amount of friction, sand is applied into the wheel-track gap by compressed air.

As part of a new tram project, LÜTZE components are being used for the temperature control and compressed air supply in the sanding system. Two LÜTZE tem-

LÜTZE semiconductor module. A LCON threshold switch automatically controls the temperature of the valve block. The temperature is monitored by a PT100 installed in the valve block which is then transmitted to the LCON threshold switch. If the temperature drops below 10 °C, the heating is activated by a LÜTZE semiconductor module. The PT100 sensor is also monitored for wire breaks.

By using these compact modules with an installation width of just 6.2 mm each, the complete temperature control circuit can be housed in a small switch box inside the compressor box.

## Sanding is precision work

Modern sanding systems only release the amount of sand that is actually required. This reduces the operating costs as well as the amount of dust pollution for the environment.

Solenoid metering devices are used to meter the exact quantity of sand. They are actuated with a pulse frequency between 1 and 10 Hz. The company NOWE also relies on LÜTZE components to actuate these metering devices. Due to the high switching frequency and inductive load, the decision was taken to use semiconductor modules. Regardless of whether the vehicle has a 24 V or 110 V supply – LÜTZE offers the right solution for every application.



## Why is sand applied?

Humidity, dirt or leaves on the track reduce the level of traction in the wheel-track contact. This can significantly increase the acceleration and braking distance. Besides inhibiting the operational safety and

perature signal converters with PT100 input record both the ambient temperature and the heat pad temperature. The analogue signals are processed by a PLC which can also actuate the heating of the drain valve and heat pad when required via a



Photo credit: HeiterBlick



# From products to solutions!

Installation • Cabinet • Automation • OEM • Transportation

