SIKORA EXTRA

Your magazine for Wire & Cable | Optical Fiber

Dear readers,

For 45 years, SIKORA is active in the wire and cable market and provides you as a competent partner with innovative and proven product solutions. We now serve further promising business areas such as the hose and tube as well as plastics market. Subsequently, the impression arose among our customers in the cable industry that we are focusing strongly on the new markets.

Nevertheless, the wire and cable market is still the foundation of our company. This basis enabled us to expand our technologies to new systems and application areas. The resulting broader insights and gained experiences are transferred to the cable market. Please rest assured that you can always expect future oriented products from us. Make sure to see for yourself at wire 2018 in Düsseldorf, Germany.

Visit our exhibition booth in hall 9, booth A41. We are looking forward to welcoming you there. Get inspired in advance in this issue of the EXTRA by a virtual tour of our exhibition booth and our technologies for quality control for wire & cable extrusion, which we will present to you live in Düsseldorf.

We are looking forward to seeing you.

Enjoy reading!

Sincerely,

Dr. Christian Frank
CEO SIKORA AG

Harry Prunk
Executive board SIKORA AG

f.l.: Dr. Christian Frank, Harry Prunk

CONTENT

VISIT US AT THE WIRE 2018!

STRATEGIC INVESTMENT IN THE FUTURE

Laying of the foundation stone for the new SIKORA production building in Bremen, Germany

Laying of the foundation stone at SIKORA: f. l. Jürgen Menke and Fikret Egi (Zechbau), Harald and Bernadette Sikora (SIKORA HOLDING), Jürgen Keil (Gruppe GME), Dr. Christian Frank and Harry Prunk (SIKORA AG)

On December 12, 2017, at 12:12 p.m., SIKORA laid the foundation stone for the new production building at their headquarters in Bremen-Mahndorf, Germany, in the presence of employees and business partners. The expansion of the headquarters offers more space for a more efficient production and logistics as well as good conditions for communication, creativity, and innovations. The completion of the building is planned for November 2018.

The new production building, with an effective area of 7,000 m² on three floors, offers more than additional space for employees and production. Planned are also areas for communication and creativity to create room for new ideas and innovations. Furthermore, the expansion will be used to make existing processes more efficient and innovative. The inclusion of current lean production concepts is a central element in order to increase productivity. The result is a more efficient and innovative production for the assurance of highest product quality as well as delivery reliability.

"The expansion at our production headquarters in Bremen, Germany, is a strategic investment in the future", says Dr. Christian Frank, CEO of SIKORA AG. "We invest in further growth and global competitiveness." Strong growth as well as diversification of the company to new markets and accompanying new and further development of technologies and devices were the reasons for the expansion. "With our large product portfolio for the segment cable as well as for the area optical fiber measuring technology and the hose and tube, sheet and plastics industries, which grew strongly over the last years, we reached our capacity limit with the old production building", says Dr. Christian Frank. The new building offers 350 % more space for the growing business.

The architectural implementation of the production building is carried out by Gruppe GME, who also realized the three previous SIKORA buildings. "We have found an optimal solution to combine modernity with tradition. That is reflected in the design of the façade and the inventory planning", explains Jürgen Keil, Shareholder at Gruppe GME.

During the construction phase, the production has been moved to a building only 400 m from SIKORA headquarters, ensuring a very short connection to management, administration and the research and development team.

Design of the new SIKORA production building

„THE WIRE AND CABLE BUSINESS IS ONE OF OUR CORE MARKETS“

Interview with Harry Prunk, Executive board SIKORA AG

wire 2018, from April 16 to 20, 2018, is with 70,000 visitors the largest trade exhibition for wire and cable and known in the industry as the leading trade fair for the international market. Again this year, SIKORA will be present with a booth. In our interview with Harry Prunk, we asked about the importance of the trade fair for SIKORA, the possibilities of measuring technologies in terms of Industry 4.0 and about the technical highlights that will be presented by SIKORA.

Mr. Prunk, the wire is one of the oldest leading trade fairs for wire and cable. How important is this exhibition to SIKORA?
Every other year, all stakeholders of the wire and cable industry meet in Düsseldorf. Manufacturers, processors, suppliers, and providers use this week to discuss technologies, projects, and trends of the industry. SIKORA has been participating in the exhibition since 1976, and still today, the wire and cable business is one of our core markets. Therefore, the wire is for us the most important trade fair for the wire and cable industry worldwide. In Düsseldorf, we have the opportunity to meet many customers in a short period of time. Furthermore, many friendships have developed with our partners through the years. Thus, I am not only looking forward to interesting discussions about SIKORA technologies, but also to seeing old friends.

At SIKORA, what does Industry 4.0 mean and what are the benefits for the customer?
Industry 4.0 means the intelligent connection of humans, technologies, and processes. Thus, production lines can be operated more flexible and efficient and the quality of products can be increased. The electrification is growing worldwide and hence the need for cables. Simultaneously, the requirements of our customers concerning measuring technologies become more diverse. Whereas in the past a classic quality control, meaning the measurement of product parameters on line as well as data transfer and diagnosis, were sufficient, nowadays the demands on technologies are more comprehensive. Customers want to intervene in the process early on and control it permanently. This is realized by an automatic control of the production line and in line with Industry 4.0. The customer is provided with the relevant information via the SIKORA processor systems or directly by the measuring systems. Furthermore, SIKORA devices have an optional OPC UA interface that enables the transfer of data within all IT systems. With SIKORA systems, our customers receive smart technologies of the future to deliver highest quality and make production lines more efficient.


Harry Prunk
Vorstand SIKORA AG

What can customers expect from SIKORA's exhibition booth?
They can definitely expect many innovative measuring, control, inspection, analysis and sorting systems that further optimize production processes. Modern Laser and X-ray technologies measure precisely and reliably product parameters such as diameter, ovality, wall thickness and concentricity. In addition, SIKORA's product portfolio comprises spark testers for the detection of insulation faults, lump detectors for the detection of faults on the product surface, capacity measuring systems as well as devices for reliable conductor preheating and temperature measurement and control. In addition, visitors will get to know our sophisticated systems for quality assurance of optical fibers in the drawing tower.

Another highlight will be the PURITY SCANNER for online inspection and sorting of plastic material that is used, for example, for the insulation of power cables. Furthermore, the PURITY CONCEPT Systems will be presented at the wire. With this technological innovation, there are devices available for offline inspection and analysis of pellets, flakes and tapes/films.


SIKORA
Technology To Perfection
Mess- und Regeltechnologie
Measuring and Control Technology
Inspektions-, Analyse- und Sortiersysteme
Inspection, Analysis and Sorting Systems
PLASTICS
HIGH VOLTAGE
INSULATING A
RITY SCANNER
wire

X-RAY 8000 NXT: X-ray technology measures diameter, wall thickness, and concentricity for the medium and high voltage cable production

A highlight at the SIKORA exhibition booth is the X-RAY 8000 NXT – the worldwide industrial standard for quality assurance of medium, high, and extra-high voltage cables in CV lines. It measures the concentricity, wall thickness, diameter, and ovality of up to three layers of XLPE and EPR isolated cables during production. Measuring values for the centering of the injection tools and control are available immediately after the starting of the line. The multi-sensor technology (MST) and two high-speed scanners ensure a reliable online measurement. With each single scan, the MST measures the movement of the cable, compensates vibrations and provides double the number of measurements.

WIRE-TEMP 6000: Self-sufficient temperature measurement system

The WIRE-TEMP 6000 measures continuously and precisely the conductor temperature – online and contactless. The measuring device is available for product diameter from 0.32 to 50 mm and therefore, suitable for quality assurance in high voltage and data cable lines. The measurement of the temperature is independent of the cross section, material, surface structure, and speed. Especially interesting is the thermal image sensor in an infrared camera that precisely provides the surface temperature without any calibration, and therefore, reliable values for the control of a conductor preheating.

PURITY SCANNER: Online inspection and sorting of XLPE and semiconductor pellets

A further highlight at the wire is the PURITY SCANNER for online inspection and sorting of plastic pellets that are used for the insulation of medium, high, and extra-high voltage cables as well as onshore and offshore cables. The unique combination of an X-ray camera with an optical camera system is currently the only technology that reliably detects contamination on the surface as well as inside of plastic pellets. Contaminated pellets are automatically sorted out.

PURITY CONCEPT Systems: Offline inspection and analysis of pellets, flakes, and films/tapes

SIKORA engineers developed the PURITY CONCEPT Systems for small material throughputs and applications where sample testing or an incoming goods inspection is sufficient. These analysis devices are alternatively equipped with X-ray technology, optical cameras or infrared sensors and detect contamination in pellets, flakes, and tapes. For example, the PURITY CONCEPT Systems are used to analyze pellets that have been detected and sorted out by the PURITY SCANNER. Another typical application is the testing of tapes that are used when manufacturing factory joints. The interplay of online and offline inspection and analysis provides an absolute control of the material purity as well as the development of a database to further improve processes and avoid future contamination.

SIKORA AT THE WIRE 2018 (9A41)

Visit us in hall 9 at booth A41

The wire 2018 will take place from April 16 to 20, 2018, in Düsseldorf. Again, SIKORA will present innovative measuring, control, inspection, sorting, and analysis systems from its extensive product portfolio. On the exhibition booth 9A41, with a space of 200 m² on two levels, visitors can discover the most recent technological innovations for quality control and process optimization for the wire and cable, optical fiber as well as plastics industries.

X-RAY 6000: Measurement of wall thickness, concentricity, diameter, and ovality in jacketing lines
For continuous quality control during the insulation or jacketing of conductors and cables, the X-ray measuring devices X-RAY 6000 as well as X-RAY 6000 PRO are recommended. Both systems precisely provide reliable measuring values regarding diameter, wall thickness, concentricity as well as ovality for a reproducible product quality. With the X-RAY 6000 PRO, layer thicknesses of any kind of material are measurable. A maximum of productivity is achieved by the automatic control of line speed and extruder rpm.

LASER Series 2000/6000: Diameter measurement on the highest level
In extrusion lines, the devices of the LASER Series 2000 and LASER Series 6000 are indispensable components for a diameter measurement on the highest level. Furthermore, the classic and high-end devices are used in rewinding lines for the wire drawing. They stand out by their high precision and continuous functionality without calibration or maintenance times. Due to up to 5,000 measurements per second/ per axis, the LASER Series 6000 impresses with the highest single value precision for an efficient line control. The integrated lump detector function ensures a detection of irregularities on the product surface of transparent and non-transparent materials. In addition to standard interfaces, the device series provides OPC UA, and therefore, is best equipped for "Industry 4.0".

SPARK 6000: Safety for every cable production
SIKORA offers a complete program of direct current (DC), high frequency (HF) and alternating current (AC) spark testers. Already during the extrusion, the insulation of wires and cables is tested with the high voltage testing devices and possible insulation faults are detected and documented in a timely manner. Further application areas are rewinding lines. For the testing, the dry cable running through the bead chain electrode of the spark tester is exposed to the selected test voltage. Therefore, faults in the insulation are reliably detected.

FIBER Series 6000: Online quality control of optical fibers in the drawing tower
By means of a drawing tower model, SIKORA presents live its broad portfolio of measuring systems for quality control of optical fibers at different positions. There will be systems presented for the measurement of the diameter and the position of the naked and coated fiber as well for the determination of the tension. Furthermore, gauge heads are displayed for the measurement of the fiber temperature at the hot position of the drawing process, to determine the fiber temperature for the control of the furnace, and at the cold end, to exactly dose the Helium used for the cooling, and therefore, to save costs. In addition, a gauge head for the measurement of the concentricity of the coating as well as for the detection of lumps on the surface of the coated fiber is exhibited.

CENTERVIEW 8000: Measurement of concentricity, diameter, and ovality
With the CENTERVIEW 8000, SIKORA presents a measuring system for the non-contact, online 8-point-eccentricity, 4-axes-diameter and 8-point-ovality measurement of coax cables, LAN cables as well as automotive and installation cables to the global public. Technical highlights of the CENTERVIEW 8000 are the graphic visualization of measuring values as a scatter plot that shows the distribution of short-term variations as well as the automatic positioning of the gauge head to the cable position for highest reliability. A further feature is the measurement of micro-coax cables with a diameter range from 0.1 to 10 mm.

PREHEATER 6000 TC: Temperature controlled conductor preheating for an optimal adhesion of the insulation
PREHEATER 6000 TC (Temperature Controlled) is the intelligent solution for a precise preheating of the conductor to the nominal temperature. A reliable conductor preheating during the production of high-quality cables, especially for automotive and data cables, is essential to guarantee an optimal adhesion of the insulation on the conductor respectively a controlled foaming. Reproducible processes are the result that contributes to an increase of quality and productivity.

Further devices at the SIKORA exhibition booth

- **LUMP 2000**: Measuring technology for the detection of lumps and neckdowns in two or three measuring planes with double sensor technology
- **ULTRATEMP 6000**: Non-contact temperature measurement of the polyethylene melt
- **CAPACITANCE 2000**: Innovative capacitance measurement with multi-zones technology as well as integrated FFT and SRL analysis
- **Display and control systems:** Powerful ECOCONTROL 6000, 1000, and 600 processor systems as well as low-cost display and control devices REMOTE 2000 and DISPLAY 2000


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Technology To Perfection
AND SHEATHING
DATA AND AUTOMOTIVE
SIKORA
Technology To Perfection
OPTICAL FIBER
Mess- und Regeltechnologie
Measuring and Control Technology
Inspektions-, Analyse- und Sortiersysteme
Inspection, Analysis and Sorting Systems
2018

GLOBAL SERVICE CLOSE BY

Our global sales and service network ensures that our customers are always optimally advised

SIKORA is not only recognized for quality and reliability of measuring, control, inspection, analysis, and sorting devices, but also for a unique global service. Our customized service concept in cooperation with the service network consisting of 14 subsidiaries, assures that our customers are always provided with perfect support.

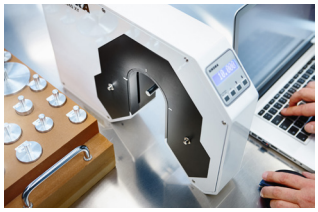
Installation and training

The professional commissioning and installation of SIKORA devices is essential for precise measuring results. This includes a professional introduction to operate and analyze the systems. Service engineers worldwide are ready to support customers directly on-site. The geographical proximity as well as a common language are essential advantages. In addition to the general user introduction, SIKORA also organizes, upon request, individual training at the headquarters in Bremen, Germany. The training is designed to provide users with targeted information for the operation and maintenance of the devices. The application of demonstration devices and realistic simulations enables the user to react appropriately to events later on.

SIKORA training at headquarters in Bremen, Germany – perfect preparation for users

Maintenance and calibration

"Preventive Maintenance" is an essential factor regarding the longevity of SIKORA devices, which are usually daily in use for many years. Whether basic cleaning, functional testing, testing of operating safety or calibration with regard to certified calibration standards according to ISO 9001 – the correct use of the devices ensures that SIKORA gauges operate reliably at all times – with an availability of up to 99.98 %. The calibration of devices can be performed by SIKORA service engineers in Bremen, Germany, in a subsidiary equipped for this task (in-house calibration) or at a customer's plant.



SIKORA maintenance and calibration – professional configuration for precise measuring values

Original parts and refurbishments

In addition to professional maintenance and calibration, perfectly fitting spare parts and equipment refurbishment play an essential role to guarantee the longevity of devices. In case a repair or exchange of wearing parts is needed, SIKORA offers original spare parts including warranty. Customers benefit from the global SIKORA service network where all subsidiaries as well as the German headquarters work hand in hand to organize a quick availability and delivery of spare parts. In order to ensure that devices are equipped with state-of-the-art technology, SIKORA regularly provides software and hardware updates for selected devices. Therefore, customers can ensure that their measuring equipment is up to date even after years of use.

SIKORA spare parts – perfect interaction for longevity of devices

Smart Assistance Manager (SAM) and maintenance programs

At SIKORA, reliability is key. Maintenance tasks, such as functional and safety tests, basic cleaning, verification of commissioning as well as calibration tasks according to measuring standards, are available in the form of carefree packages and are performed by SIKORA engineers. Thoughts about wearing parts as well as the timely ordering and correct installation are a thing of the past. Whether a service engineer from one of the subsidiaries or from headquarters in Bremen, Germany, the complete coordination – including scheduling as well as the preparation and follow-up on maintenance dates – is carried out by SIKORA. Furthermore, customers are able to get in touch with their support contact person via the Smart Assistance Manager (SAM) at any time. For the combination of maintenance programs and Smart Assistance Manager, customers receive a discount on the yearly SAM license. The individual maintenance programs are concluded for one, three or five years.

SIKORA maintenance programs – reliable maintenance of devices for permanent availability

INDUSTRIE 4.0 AND IIOT*

Shape the future with SIKORA devices

The term "Industry 4.0" – together with the "Industrial Internet of Things" (IIoT) – shapes the discourse on sustainability and competiveness of the industry. The interaction between human, machine, and production during the running production process enables an independent production control via intelligent machines. SIKORA measuring technologies are equipped with interfaces for Industry 4.0. How the customer benefits from it shows the following overview.

Data transmission

In classic production lines, SIKORA devices receive nominal values from a programmable logic controller (PLC) of the customer and in return transmit real measuring values. The received information are the basis of process optimization.

Visualization of measuring values and plant control

With the integration of SIKORA's ECOCONTROL processor system into the production line, the customer gains various new networking and control possibilities in the area of Industry 4.0. All SIKORA measuring devices are connected to the ECOCONTROL. It visualizes the transmitted data, creates trend and statistical data and, on this basis, initiates specific measures for plant control. The regulation is done by increasing or decreasing the line speed or extruder rpm. Furthermore, the ECOCONTROL is able to mirror the recorded production data to any desired display systems in the line where it can be further processed.

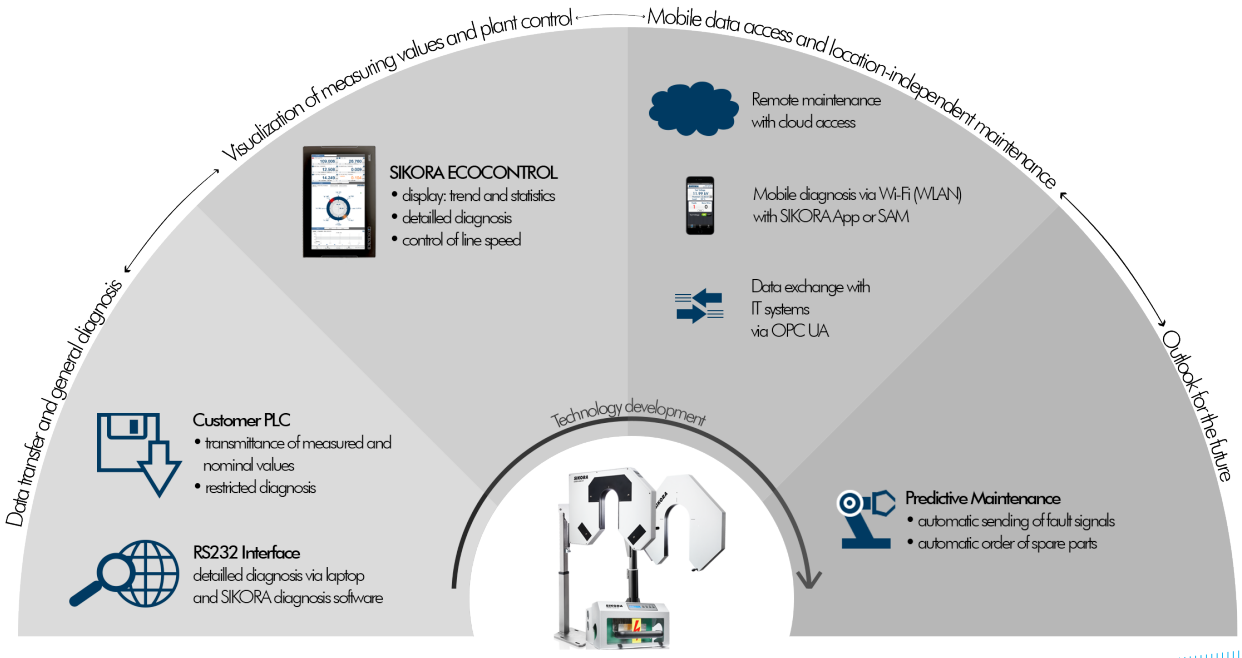
Mobile data accessing

The SIKORA processor devices provide the industrial network protocol OPC UA, which increasingly prevails as standard language of the IIoT and allows a comprehensive data exchange with IT systems. SIKORA devices are equipped with all standard interfaces, and therefore, fit for Industry 4.0 and with regard to the hardware optimally designed for future developments. Via an Ethernet interface, a remote maintenance is also possible with the ECOCONTROL and allows SIKORA employees to access a system independent of the location.

SIKORA service

SIKORA service offers customers comprehensive services regarding the area of Industry 4.0. This includes a mobile diagnosis by Wi-Fi transmission, for example, from the LASER Series 6000 or SPARK 6000 to the SIKORA App or SAM (Smart Assistance Manager). In addition, remote maintenance via safe cloud accesses is increasingly gaining importance for customers. The ECOCONTROL also enables remote maintenance via an Ethernet interface, so that SIKORA employees may access the system location-independent if needed. The development of special maintenance software tailored to individual customer requirements that enables predictive product maintenance will also be possible in the future. For example, a LASER Series 6000 device may then send an automated fault message when the gauge head is dirty.

*Industrial Internet of Things



SUCCESSFUL SUPLLIER PERFORMANCES

Bahra Cables grades SIKORA as good supplier

An outstanding product quality, timely deliveries and satisfied customers – these are SIKORA's claims toward a successful cooperation with customers. Recurring supplier evaluations by customers represent an important instrument for SIKORA to analyze performances and take actions for a continued business relationship.

Supplier evaluation is an important part of the supplier management respectively supplier analysis and is done in regular intervals, usually annually. It is used for a systematic evaluation of supplier performances based on evaluation criteria. These are determined by the evaluating company mirroring individual Key Performance Indicators (KPIs). Often, the KPIs are key figures from the fields of logistics, quality, purchase, and/or technology.

The resulting overall performance of the supplier is classified, normally in a classic ABC system. The supplier evaluation gives the purchase department useful information whether a cooperation with checked manufacturers should be started, intensified or, if necessary, reduced. Furthermore, existing suppliers get the possibility to improve their performances by (counter) measures.

In November 2017, the company Bahra Cables, a leading wire and cable manufacturer from Saudi Arabia, evaluated the cooperation with SIKORA as "good".

SIKORA understands this positive evaluation as a result of its own supplier evaluations. In order to support customers with the highest quality and competent service, SIKORA also only chooses suppliers that meet the high requirements.

Frequent criteria for supplier evaluations:

- Timeliness
- Returns
- Quality of delivered products
- Service
- Price
- Innovative capability of the supplier

RAFFLE

H	A	R	C	V	Ö	X	W	G	K	N	F	T	K	A
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K	R	L	P	S	R	Ä	C	Q	N	Q	N	J	K	C
K	V	B	S	K	L	A	J	D	X	V	T	L	G	Ö
V	R	J	K	A	W	K	L	V	D	T	G	J	A	K
L	W	G	H	E	B	L	O	R	T	N	O	C	V	A

Find the hidden SIKORA terms

This alphabetical jumble hides 5 SIKORA terms in total that are written in all directions.

Find these 5 terms and send us a picture of your solution.

LASER
CONTROL
SIKORA
PERFECTION
QUALITY

Send us an email with your solution by May 31st, 2018, to: extra@sikora.net

Win one of three **Creative Sound Blaster Play!3** (USB-DAC-amplifier/external sound card)

Your contact details will not be passed on to third parties. Each correct answer takes part in the raffle. Employees of SIKORA AG and SIKORA Holding GmbH & Co. KG and their relatives are excluded from participation. Each player can only participate once. We value the first email, all subsequent e-mails will be considered invalid. The legal process is excluded.
GOOD LUCK!

Congratulations to the winners of the pellet math raffle. The solution was: 1973

- **Melanie Dettmer**
- **David Connor**
- **Rainer Schmidt**

NEXT EVENTS

- wire Expo May 15-16, 2018 | Nashville, TN, USA
- wire China Sep 26-29, 2018 | Shanghai, China
- IWCS Oct 14-17, 2018 | Providence, RI, USA
- Wire & Cable India Nov 27-29, 2018 | Mumbai, India

Apr 16 - 20, 2018
WIRE / TUBE
Booth 9A41 / Booth 6J32
Düsseldorf, Germany

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Technology To Perfection

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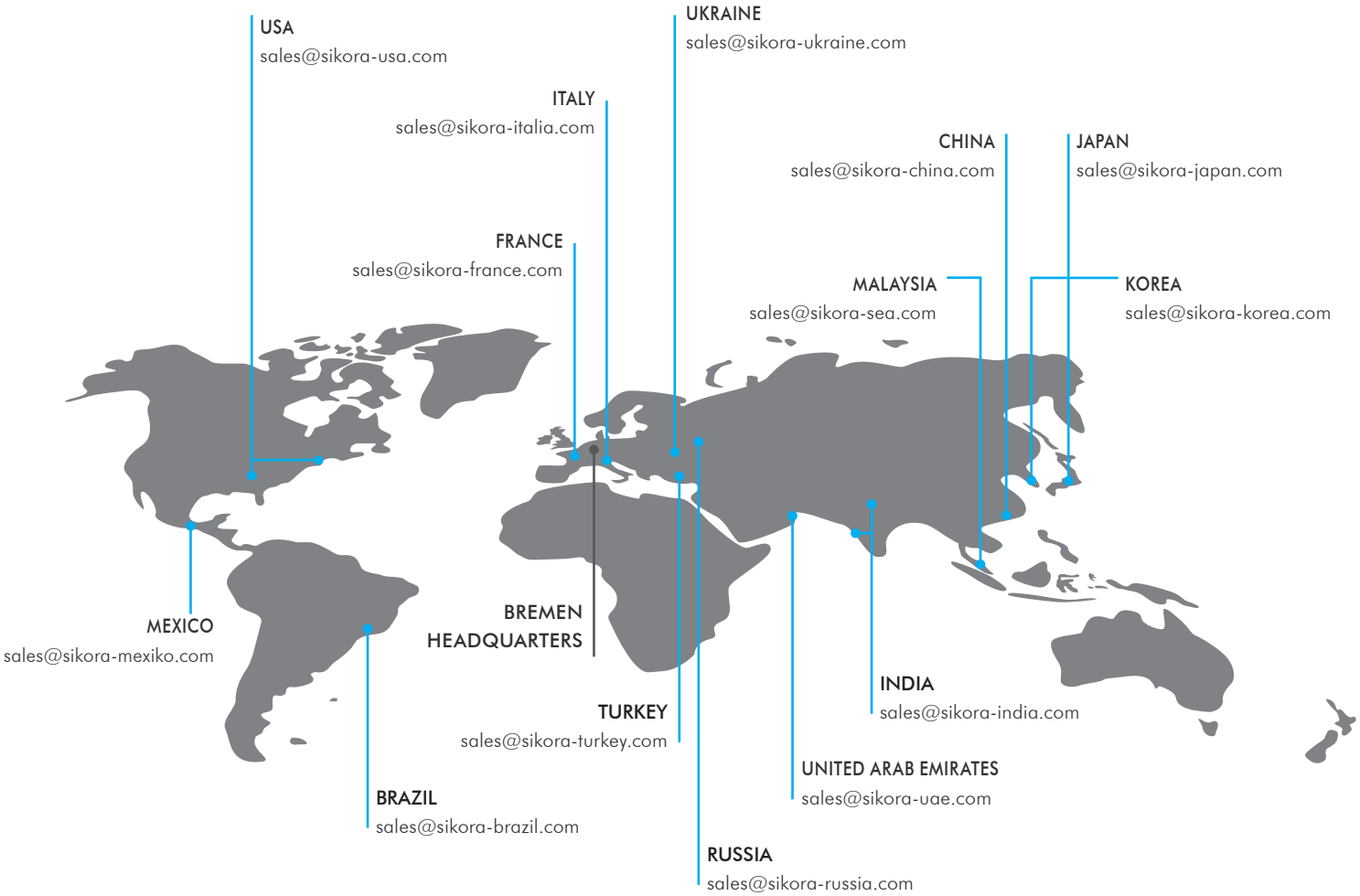

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