



SIKORA at wire –
These highlights await you

04

Success all along the line – X-RAY 8700 NXT

08



Dear readers,

Finally, we are getting a taste of trade fair air again! We are very pleased that the long period of waiting is now over and that wire will finally take place again after being postponed several times. From June 20 to 24, 2022, the leading trade fair for the wire & cable market opens its doors for the international trade audience. Of course, SIKORA will also be on site in Düsseldorf. We cordially invite you to visit us at our booth A41 in hall 9.

Convince yourself personally of our trendsetting technologies for quality control during the wire & cable production. In advance, this EXTRA edition presents the highlights you can expect at our booth.

Dr. Christian Frank
CEO SIKORA AG

These include our FIBER TENSION 6003 for use in the drawing tower, which impresses not only with its remarkable measuring rate. Also our LASER Series 2000 diameter gauge heads convince again and again by their trouble-free operation. Furthermore, experience why final quality control with SIKORA's X-RAY 8700 NXT is also helpful at the end of the CV line. Furthermore, we would like to introduce our SIKORA CARE PACKAGE from Service.

We hope to welcome as many of you as possible personally at the wire and are looking forward to interesting conversations with you. Until then, we hope you enjoy reading this issue!

Sincerely,

Dr. Jörg Wissdorf
Executive Board SIKORA AG



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SIKORA AT WIRE 2022

It was worth the wait for these highlights



Turning ideas into innovations and products that achieve the highest quality, sustainability and cost efficiency in the wire, cable and plastics industry is SIKORA's claim. The company underlines this at the wire with the "Solution Corner". Customers are invited to personally discuss their ideas, visions and technical requirements for quality control systems for the future of measuring technology with the SIKORA experts in a creative atmosphere.

Finally, the time has come again. After four years without wire, the leading trade fair in the wire & cable sector is back. Of course, SIKORA will be there as well.

For the comeback we have thought up some very special highlights for you, which you can experience at our booth A41 in hall 9.



The quality of a cable starts with the purity of the raw material. Therefore, SIKORA offers online and offline inspection, sorting and analysis systems for plastic pellets. By using inspection and sorting systems, impurities are detected and automatically sorted out, breakdowns are eliminated and material costs are saved. In addition to economic benefits, the environment can be protected at the same time through reduced waste volumes.

With the premiere of the FIBER TENSION 6003 SIKORA extends its product family for quality control of optical fibers. The gauge head offers extremely fast, reliable and precise tension measurement and control. Thanks to the high measuring rate of up to 10 kHz and the application of the birefringence principle, the stand-alone gauge head is especially attractive for manufacturers of high-end solutions.

Maintaining the availability and efficiency of the SIKORA systems at the customer's site has top priority for SIKORA. At wire, the SIKORA Service team presents the entire range of its service portfolio. From installation and commissioning of the devices to consulting and training, while always matching the individual customer requirements.

Visitors can convince themselves of the performance of the measuring devices during detailed product demonstrations at wire. One highlight is the X-RAY 6000 PRO X-ray measuring system, which is used to measure the wall thickness, eccentricity, diameter and ovality of cables with up to three different material layers, for example in insulating and sheathing lines.

TECHNOLOGY FASTER THAN EVER BEFORE

High-end stand-alone gauge head for measuring the tension of optical fibers

The fast, lossless transmission of data over long distances using optical fiber cables is essential for our increasingly digital and networked societies. In order to ensure an optimum optical fiber quality, a variety of measurement and control technologies are already used in the drawing process. A decisive influencing factor for the fiber quality is the tension.

Interesting for this application is the FIBER TENSION 6003 from SIKORA with a remarkable measuring rate of 10 kHz. The self-sufficient measuring system offers a robust and precise tension measurement for validation as well as control of this eminently important parameter. The measuring principle is based on the refractive properties of glass. The FIBER TENSION 6003 is particularly attractive for manufacturers of high-end solutions where the drawing process is controlled by the tension. Thus, the FIBER TENSION 6003 is predestined for optical fibers being processed into premium optical fiber cables for which particularly high requirements and standards exist.

The integrated measuring method is based on the principle of birefringence. The FIBER TENSION 6003 can be used for both hot and cold measurement of the bare fiber, independent of production influences such as the position of the fiber in the measuring field, the production speed and the vibration or oscillation of the fiber. Installed before or after cooling, the system generates reliable and stable measuring values and thus enables immediate control of the tension.

All benefits of the FIBER TENSION 6003 at one glance

- Highly accurate tension measurement based on the principle of birefringence
- Unique stand-alone gauge head for new and existing drawing towers
- Unsurpassed measuring rate of up to 10 kHz
- Measuring range of up to 400 g
- Exceptional repeatability of ± 0.1 g



Overview of all SIKORA FIBER devices

BETTER TO GET A SHARP PICTURE RIGHT AWAY

Precise diameter values despite vibrations of the sample

Fast-moving subjects, such as a passing car, must be photographed with a short exposure time if the image is to succeed. Exposure times that are too long result in undesirable blurring. Also for the measuring technology used to measure diameters during cable production, a short exposure time is decisive for accuracy and ultimately for the quality of the manufactured cable.

In numerous extrusion lines worldwide, the gauge heads of the LASER Series 2000 measure the diameter and ovality of conductors, wires, cables and other products without contact. Incomparable precision, high availability as well as proven industrial design characterize all gauge heads and thus set SIKORA-typical accents.

At the heart of the devices is the innovative method for measuring the diameter using diffraction analysis. Together with a pulse-controlled laser diode, whose extremely short exposure time is $0.25 \mu\text{s}$, this combination provides continuously precise measurements. Even in the presence of production-related vibration or rotating oscillation of the sample, it thus contributes significantly to the highest quality of the end product. Every single one of 500 measured values/second is recorded in the entire three-dimensional measuring field with full image sharpness, thus ensuring absolute measuring accuracy.

Particularly in the case of production-related vibrations, the innovative measuring principle and especially the short exposure time pay off.



- Measuring methods with short exposure times, such as the LASER Series 2000 from SIKORA, capture every single measured value in highest image sharpness for highest accuracy, even with vibrating samples (conductors).
- Alternative measuring methods with long exposure times, analogous to photography, result in considerable blurring of the shadow image in the case of vibrating products. Inevitably, this is followed by inaccurate measurement results whose deviations cannot be completely compensated even by the formation of average values.



Recording with the gauge heads of the LASER Series 2000 from SIKORA



Recording with longer exposure time

SOPHISTICATED POWER CABLES

Innovative quality control at the beginning and end of the CV line

Power cables are sophisticated – both in terms of their area of application and their manufacture. As submarine and underground cables, they transport energy to where it is needed. To ensure that the power arrives safely, the highest cable quality is essential. That is why manufacturers use innovative systems to test the plastic material and cable dimensions in CV lines.

The purer the XLPE or HPTPE material, the lower the risk of a cable breakdown and the more durable the cable. Therefore, the material is checked for its purity with the PURITY SCANNER ADVANCED before extrusion. Contamination, such as metallic particles from 50 µm, is automatically sorted out. This means that only pure material ends up in the cable insulation.

After the extruder, the X-RAY 8000 ADVANCED X-ray measuring system measures the dimensions of the cable, such as wall thickness, eccentricity, diameter and ovality. The measured values are recorded and visualized in real time, for a fast centering of the extrusion tools and an immediate control to nominal dimension.

At the end of the CV line, the X-ray measuring system X-RAY 8700 NXT records the cold values of the cable. In combination with the X-RAY 8000 ADVANCED at the beginning of the line, the shrinkage values for all three insulation layers of the cable can be precisely determined in this way. This ensures optimum process control and meets the highest demands on cable quality – for maximum reliability and safety.



Qingdao Hanlan

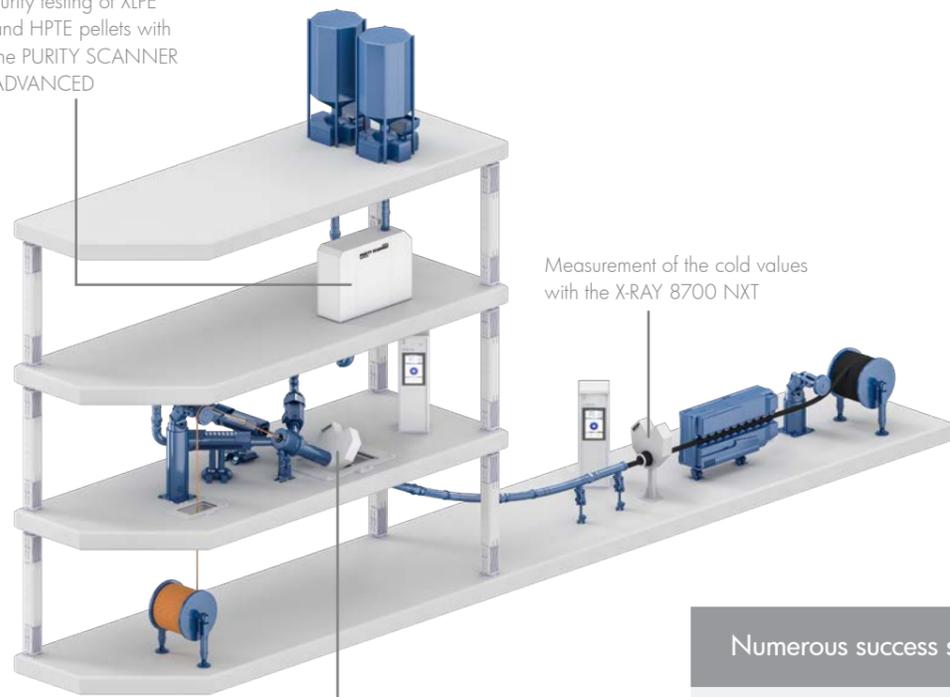


Ningbo Orient



ZTT Marine

Purity testing of XLPE and HPTPE pellets with the PURITY SCANNER ADVANCED



Measurement of the cold values with the X-RAY 8700 NXT

Measurement of wall thickness, eccentricity, diameter and ovality with the X-RAY 8000 ADVANCED

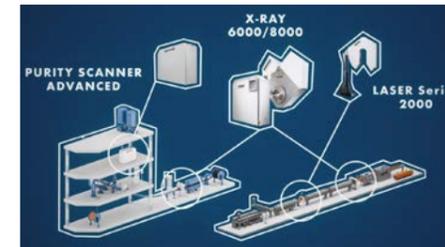
Numerous success stories

The X-RAY 8000 product family has proven itself many times in CV lines since 1993 and is today the worldwide industry standard with more than 1,800 units sold. Among others, the companies Ningbo Orient as well as Qingdao Hanlan and ZTT Marine use the X-RAY 8700 NXT in their production lines for final quality control of submarine cables.

SIKORA CARE PACKAGE – WE ARE HERE FOR YOU

Tailor-made maintenance and calibration

SIKORA offers many different devices and technologies to ensure the product quality:



X-ray technology of the X-RAY 8000 and X-RAY 6000, laser technology of the LASER Series 2000 or optical inspection cameras of the PURITY SCANNER ADVANCED and many more.

SIKORA devices are in use for many years and still measure, control and inspect as accurately as on the day of delivery. A calibration (in the sense of alignment/adjustment) to maintain the measuring accuracy is not necessary for SIKORA devices. However, certain international norms and customer requirements make regular calibrations necessary. For exactly this purpose SIKORA offers the CARE PACKAGE:



SIKORA calibrates measuring, control and inspection devices in operation regularly – according to internationally applicable standards. On site directly in the production facility. Including certification according to DIN EN ISO 9001 specifications and including all necessary and certified test equipment provided by the SIKORA Service Engineer.

The operational readiness of the complex technologies is significantly increased by regular maintenance. Therefore, professional maintenance is an integral part of the calibration by SIKORA Engineers.

Customers thus benefit from regular maintenance and professional replacement of wear parts. Any abnormalities are immediately repaired by the SIKORA Service Specialists.



SIKORA maintenance programs stand for a constantly high device availability. Appointments for calibrations and maintenance can also be booked without contractual commitment. Consultations and maintenance programs are individually tailored to the devices and needs of the customers. For regular use of this service, SIKORA recommends the discounted maintenance programs with a term of three or five years.

Save effort, time and money!



For more information about our SIKORA CARE PACKAGE please contact your SIKORA Service Representative directly.

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The SIKORA CARE PACKAGE – all-round protection. More in our video.

SIKORA SUBSIDIARIES

New offices – more capacities

At SIKORA, approximately 350 employees give their best every day to offer customers and business partners optimal solutions. With 15 international subsidiaries, SIKORA is at home all over the world and the company continues to grow. In 2021 and 2022, four SIKORA subsidiaries moved into new offices.

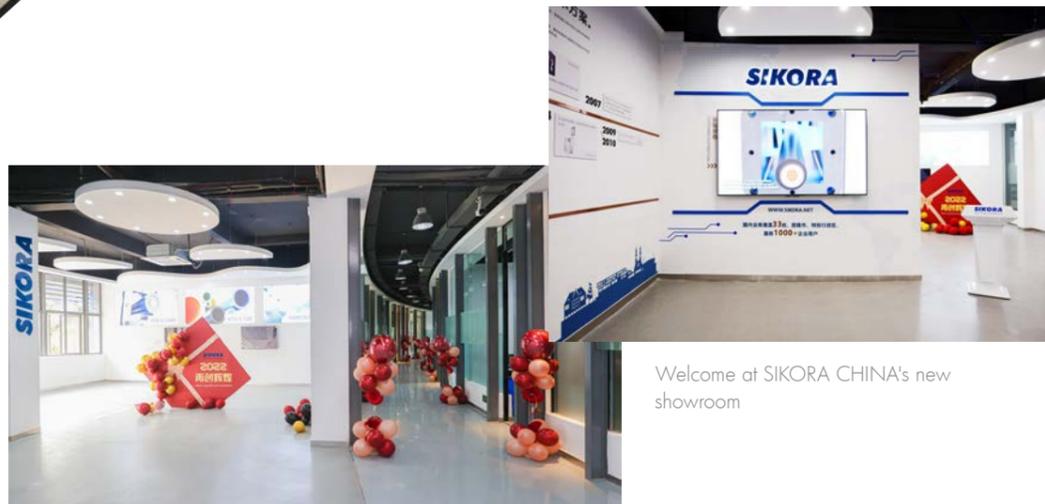
SIKORA FRANCE already made a start at the beginning of 2021. The new office in Les Ulis offers on a total of 74 m² [88.5 yd²] sufficient space for the French team as well as storage space to always be able to offer customers the fastest possible solutions. Just 20 minutes by car to the nearest airport allow quick customer visits.

In June 2021, SIKORA BRAZIL moved into 81 m² [96.9 yd²] office and work space in São Paulo – storage space for service components and devices as well as a small service workshop included. Two airports nearby connect SIKORA BRAZIL with the rest of the world.

SIKORA MEXICO and SIKORA JAPAN used December 2021 to move into their new work places. 104 m² [124.4 yd²] in Mexico and 67 m² [80.1 yd²] in Japan will be used as warehouse, office and service space. In Japan, the direct connection to a high-speed train station (Shinkansen) guarantees the mobility of the colleagues and also offers customers the quick and easy possibility to visit the SIKORA JAPAN office in Kanagawa. Thanks to the immediate proximity to one of the main roads, the Mexican subsidiary in Queretaro is also always flexible for customer inquiries.

2022 started with the relocation of the largest SIKORA subsidiary. SIKORA CHINA moved into its new premises in Fuzhou in March and now operates on 1,500 m² [1,794 yd²] – including various offices, a large service area as well as a 120 m² [143.5 yd²] showroom. Here, visitors have the opportunity to take a walk through SIKORA's history. A gallery with all important milestones of the company leads into the showroom, which offers space for all SIKORA devices.

All addresses and further contact information of the SIKORA subsidiaries can be found at www.sikora.net/contact.



Welcome at SIKORA CHINA's new showroom

RAFFLE

1. How many devices of the X-RAY 8000 family are currently in use worldwide in high voltage extrusion lines?

2. On which principle is the measuring method of the LASER Series 2000 gauge heads based on?

3. What is the measuring rate of the FIBER TENSION 6003?

4. Which durations does SIKORA offer for maintenance programs?

5. How many subsidiaries does SIKORA have?

Get informed!

SIKORA offers a wide range of different devices and systems for measurement, control, inspection, sorting and analysis.

How well do you know SIKORA? Do you know the answers to our questions?

Little tip: You will find all answers in this SIKORA EXTRA issue.

Send us your solution via email by July 31, 2022 to: extra@sikora.net

You can win one of three Troika world stroller sets.



Your contact details will not be passed on to third parties. Each correct answer takes part in the raffle. SIKORA employees and their relatives are excluded from participation. Each player can only participate once. We value the first email, all subsequent emails will be considered invalid. The legal process is excluded.

GOOD LUCK!

NEXT EVENTS

 • Wire Expo | Jun 7-8, 2022 | Dallas, TX, USA

 • wire | Jun 20-24, 2022 | Düsseldorf, Germany

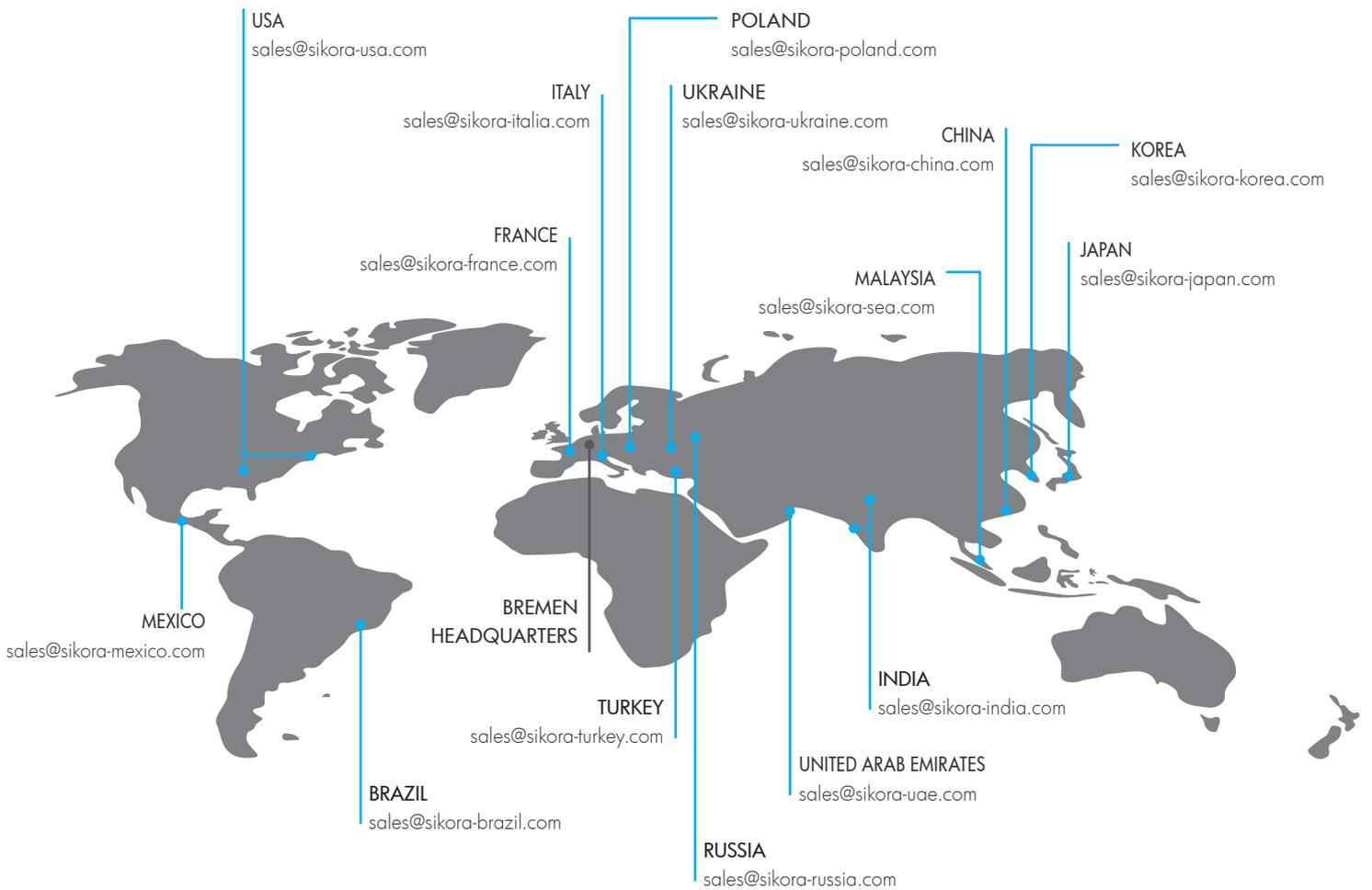
 • wire China | Sept 26-29, 2022 | Shanghai, China

Sustainability at SIKORA
Our environment is important to you, but you do not want to do without the informative SIKORA EXTRA articles? Register today at extra@sikora.net and receive the SIKORA magazine conveniently via email instead of printed material.

SIKORA

Technology To Perfection

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