



SIKORAEXTRA

Your magazine for Wire & Cable | Optical Fiber

**THOROUGHLY
EFFICIENT!**

**An investment that pays off:
X-RAY 6000 PRO 04**

**Service: Comprehensive
measurement system analysis 09**

Dear readers,

An efficient production with sustainable technologies is nowadays one of the core conditions in order to successfully exist in the world market. Therefore, the focus on technological further developments is of crucial importance at daily work at SIKORA. Optimize your production processes by using an X-RAY 6000 PRO, which ensures the quality of your cables, saves costs and leads to a considerable increase of productivity. Discover more on p. 4.

Also the CAPACITANCE 2000, due to the multi-zone technology, guarantees a reliable capacitance measurement, FFT analysis and bare patch detection of LAN, coaxial, telephone or RF cables. Read more about it on p. 7.

In addition to the development of innovative products and technologies, SIKORA makes a point of the exchange with its 14 international offices. In August, assistants and office managers from abroad met at the headquarters in Bremen to exchange their experiences and to make our world-wide client support even more efficient. More on p. 8.

Besides, we show you on p. 9, how uncomplicated and quick a measurement system analysis can be realized at your SIKORA device.

Discover these and further topics in the current EXTRA magazine.

Enjoy reading!

Sincerely,



Dr. Christian Frank
CEO SIKORA AG

Harry Prunk
Member of the board SIKORA AG



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

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**THOROUGHLY
EFFICIENT!**

AN INVESTMENT THAT PAYS OFF

SIKORA's X-RAY 6000 PRO guarantees quality in sheathing lines



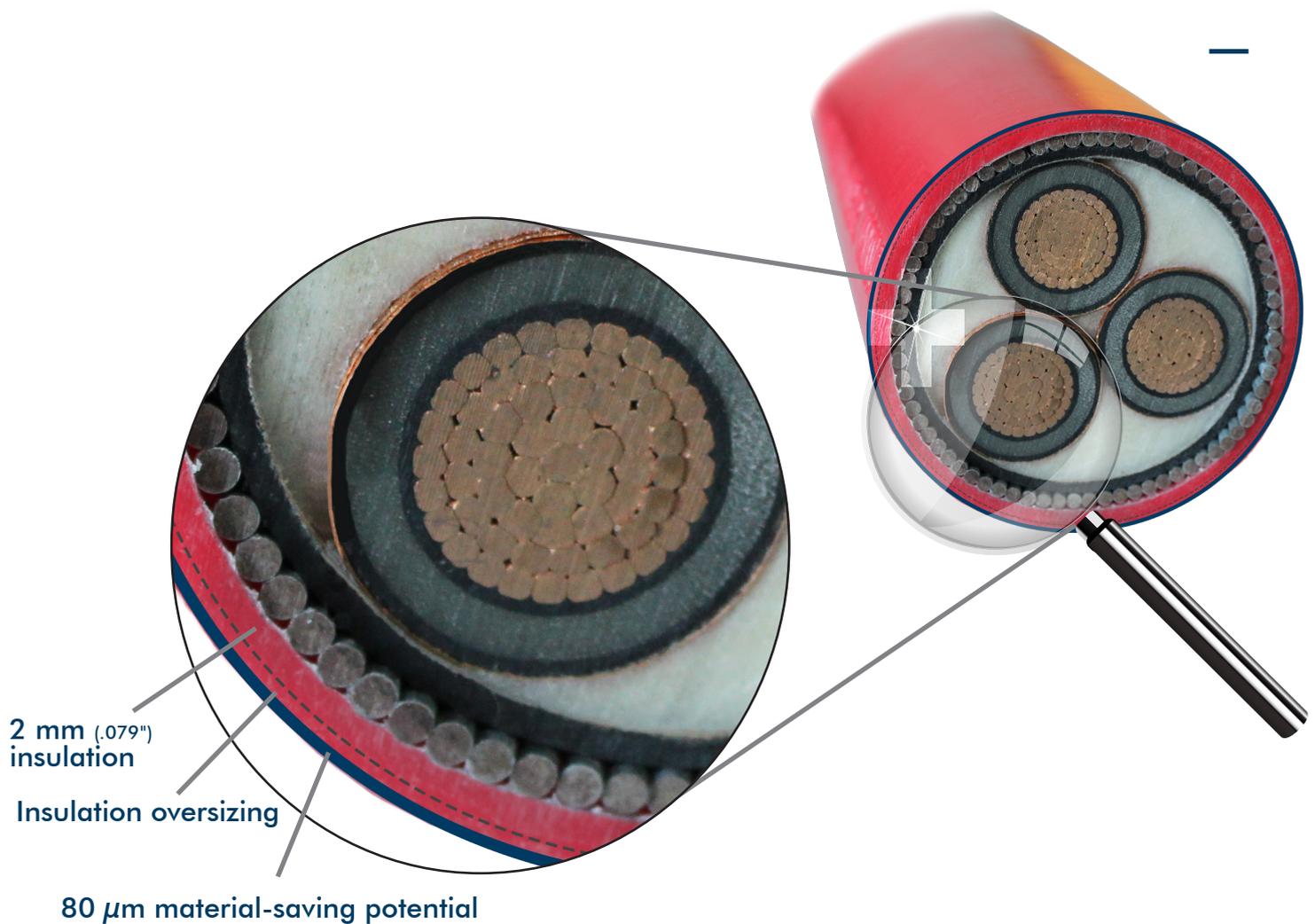
X-RAY 6000 PRO
with ECOCONTROL
6000 processor
system

The coating of energy cables requires the compliance with the highest quality standards and numerous norms. Thus, each micrometer of saved insulation material makes the production more economic and simultaneously saves the increasingly scarce resources. In order to monitor their production processes, manufacturers of energy cables rely on SIKORA's measuring and control device X-RAY 6000 PRO, which convinces with its high Return on Investment (RoI).

The X-RAY 6000 PRO continuously measures the inner and outer diameter, eccentricity, ovality as well as the average and minimum wall thickness during coating. All measuring values are immediately available when starting up the line and thus, ensure a quick and precise quality control. A significant increase in efficiency while simultaneously reducing production costs guarantees an automatic control at the minimal value of the wall thickness.

Convince yourself of the profitability of the X-RAY 6000 PRO

With the SIKORA RoI calculator, online available at www.sikora.net/en/roi, you can easily and quickly calculate, which concrete material savings you can achieve by buying a X-RAY 6000 PRO for your specific production line.

**A short example:**

An energy cable has a 2 mm (.079") oversized wall thickness. By using the X-RAY 6000 PRO in the production line, material savings of at least 4 % can be achieved. Regarding the wall thickness of 2 mm (.079"), 80 μm wall thickness can be permanently saved. Only the material saving with regard to the oversizing results in a Return on Investment (RoI) of less than a year. Then, savings of approximately 100,000 Euro per year will be achieved.

Furthermore, the measuring values of the X-RAY 6000 PRO are available directly at the line start-up. Thus, less start-up scrap is produced and the regular production process can start more quickly. In consequence, precious time is saved and good production is increased. Reducing the wall thickness to its minimum further leads to a significant increase of the productivity of the line and thus, customer satisfaction is continuously growing.

HIGHLIGHTS AT WIRE RUSSIA 2019

Innovative systems for the highest product quality, process optimization and cost savings

From June 18 to 20, 2019, SIKORA presented innovative measuring, control, inspection, sorting and analysis systems for the highest product quality, process optimization and cost savings for the wire and cable, optical fiber and plastics industries at wire Russia 2019.

A highlight on the SIKORA booth was the recently introduced X-RAY 8000 ADVANCED. With the X-ray based system, SIKORA presents High-Speed-Technology (HST) with a clear focus on the demands of MV, HV and EHV cable production. The system measures the diameter, wall thickness and eccentricity of cables up to 10 times faster than the X-RAY 8000 NXT, and thus, is predestined for an efficient control and information transparency in terms of Industry 4.0.

Another attraction at wire Russia was the PREHEATER 6000 TC (Temperature Controlled). The integrated temperature measurement controls the conductor preheating to the required temperature, for an optimal adhesion and/or foaming of the insulation of automotive and data cables.



On a drawing tower model, SIKORA presented a broad portfolio of measuring systems for quality control of optical fibers.

For the first time at wire Russia: the PURITY CONCEPT X – an offline inspection and analysis system based on X-ray technology. The system detects and analyzes e.g. metallic contamination on the surface as well as inside of plastic pellets, which are used at the cable production.

SIKORA's PURITY CONCEPT X with X-ray image of plastic material

You were not able to participate in the fair? Contact us at sales@sikora.net or +49 421 48900 0. We are glad to give you all information about our devices and about optimizing your production processes.

Have a look at our website www.sikora.net/events, to discover, at which exhibitions and conferences you can meet us.



SIKORA's PREHEATER 6000 TC continuously measures and controls the conductor temperature

ALL IN ONE – CAPACITANCE 2000

Capacitance measurement, FFT analysis and SRL prediction as well as bare patch detection in one device

The transmission of high frequency, analog or digital signals at minimum loss for the signal amplitude is an essential quality feature for all LAN, coaxial, telephone or RF cables. In this context, the measurement of the capacitance during cable production is of crucial importance. The capacitance determines the impedance of the cable for the specified frequency range and thus, the quality of the cable significantly. Thanks to the multi-zone electrode SIKORA's CAPACITANCE 2000 is predestined for a reliable capacitance measurement.

The CAPACITANCE 2000 is installed in the cooling trough and measures online the capacitance of the wire insulation and reliably detects bare patches. Additionally, the system recognizes periodical capacitance changes and determines the Structural Return Loss (SRL).

The quality control is realized by the combination of a short and a long measuring electrode which are integrated into one measuring tube. The short measuring electrode with a length of 10 mm (.39") identifies periodical capacitance variations with high spatial res-

olution by means of Fast Fourier Transformation (FFT). From the FFT data, the SRL is determined and gives information about the expected attenuation of the RF signal during data transmission. The long measuring electrode of 125 mm (4.92") measures with high precision the average capacitance value.

In combination with a diameter measuring device of the LASER Series 2000/6000 or the CENTERVIEW 8000, the CAPACITANCE 2000 also offers a control of the Capacitance and the Diameter (CD-Control). The CD-Control assures that the capacitance and the diameter comply with the requirements. This is achieved by an automatic adjustment of the cooling trough and by the control of the line speed. Both influenced quantities are controlled by the processor system ECOCONTROL 6000.

SIKORA's
CAPACITANCE
2000 in cooling
trough



FFT analysis and production data are clearly displayed at the 22" monitor ECOCONTROL 6000



GLOBAL TEAM SPIRIT: I AM SIKORA

Pursuing a strategy together

In August 2019, all SIKORA assistants and office managers of the 14 international SIKORA offices met at the headquarters in Bremen to discuss, learn and experience global processes, a consistent information status and new tools. The project had been a full success and will surely not be the last meeting of its kind.

SIKORA has a long tradition of close cooperation and exchange. The yearly sales and service meetings where employees from all offices travel to Bremen, in order to enquire about latest innovations and systems, are only one example for an intensive integration of all colleagues in daily work routine.

For the last years, SIKORA's strategy has been aimed at growth and expansion of the international support network for customers. Thus, amongst others, two new offices were built in Mexico and Malaysia and the number of employees worldwide has increased to around 300. Therefore, it is natural that processes and workflows also increase.

This year, due to the growth, all assistants from the offices and office managers came together for the first time. In a one-week workshop, topics were discussed, contacts were made and knowledge was deepened.

At the end of the week, all participants agreed that the event had been a full success. True to the motto "I AM SIKORA", the cohesion and sense of belonging of the participants were strengthened. For customers, this means: No matter where you produce and no matter which SIKORA office you might contact, you will always receive the best consultation and a strong team will stand at your side.



The participants of this year's I AM SIKORA Meeting

SERVICE: MEASUREMENT SYSTEM ANALYSIS (MSA)

Save time, costs and resources with the SIKORA service

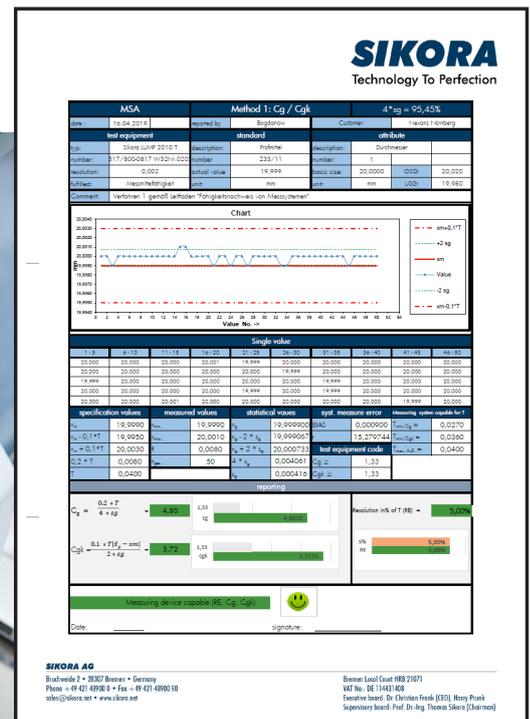
With their request for tests of measuring equipment according to the MSA method, the automotive industry has set standards that are now also being required by other industrial areas. Regular inspections of measuring devices for diameter according to the MSA method provide information on repeatability, linearity, stability and accuracy of the measurement. With the fast and simple measurement analysis, especially designed by SIKORA, effects on production are minimized and time, costs and resources are saved.

The measurement systems analysis is based on a high number of single measuring values and therefore, particularly suitable for determination of the accuracy, stability and repeatability of a measuring system. According to the requirements of MSA procedure 1 – maintenance of the measuring device without the operator's influence – a calibrated sample or measurement standard is measured 50 times (at least 25 times). All single measurements are transmitted into a corresponding formula for the calculation of the aptitude scores C_g and C_{gk} .

SIKORA uses a procedure, whereby our service technician realizes the required measurements in a fraction of the time and in which the data is automatically transferred to a special software for the calculation of the aptitude scores. In consequence, downtimes of the production line are massively reduced and the information value of the calculations increases.

If the maintenance of a measuring device shows a wrong measuring result, a specialist would already be on-site in order to arrange the corresponding calibration.

Of course, SIKORA issues a detailed measuring report after the measurement systems analysis and thus, certifies the measuring capability of the device as well as its conformity to the market requirements.



SIKORA
Technology To Perfection

Repeatable quality.

With passion, we develop future-oriented measuring and control devices for quality assurance of wires and cables, such as the **PREHEATER 6000 TC**. An innovative conductor preheater with integrated temperature measurement and control that ensures a perfect uniform conductor temperature, for increased quality and productivity.

- continuous measurement and control of the conductor temperature for optimum adhesion of the insulation material on the conductor
- precise control loop for repeatable processes



www.sikora.net/preheater6000

RAFFLE



SIKORA pictures

There are 5 flaws in the lower picture. Can you find them all?

Send us an email with a picture of your solution until November 30, 2019 to: extra@sikora.net

Win one of three **Baseus Bracket Wireless Charger and Powerbank** (Picture similar)



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 winner of the labyrinth – SIKORA EXTRA 1/19. Solution: 640

- Andy Bruneel
- Jose Ruiz
- Semih Ferik

NEXT EVENTS



• IWCS | Sep 29 - Oct 2, 2019 | Charlotte, NC, USA



• wire South America | Oct 1 - 3, 2019 | São Paulo, Brazil



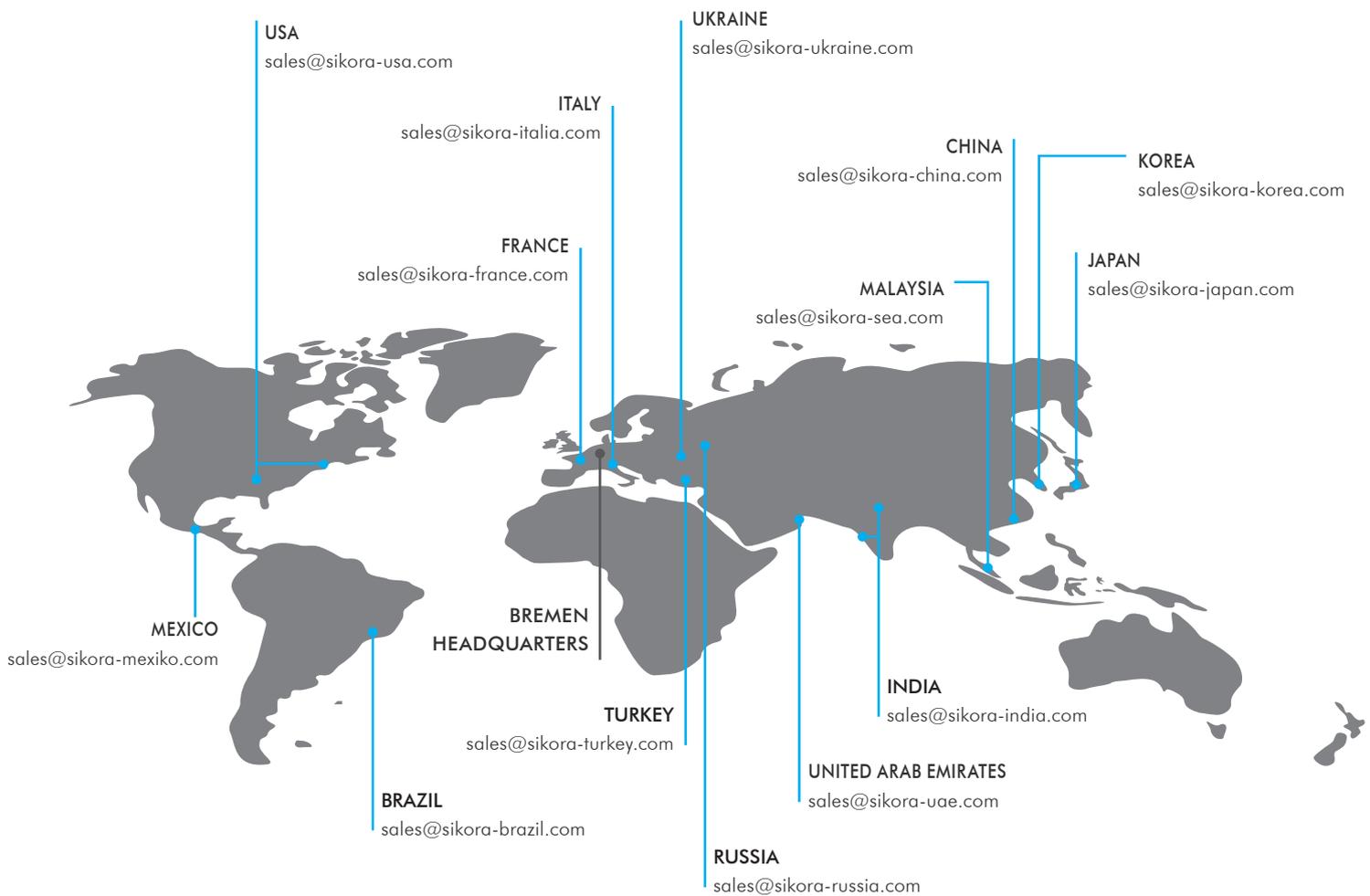
• Cable & Wire Fair | Nov 6 - 8, 2019 | New Delhi, India

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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