

SPECIAL CABLES
TEMPERATURE MEASUREMENT · CABLE HARNESSING



ABOUT US

FAMILY BUSINESS SINCE 1947





TRADITIONAL
FAMILY BUSINESS
SINCE **1947**

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WHO WE ARE

AN OVERVIEW

More than 60 years of experience in temperature measurement and control technique as well as in cable production have made a one man business a company with nearly 500 staff members. Our strength is not only the production of standard products but also the development and manufacturing of special products acc. to customers' specifications. Every year we manufacture more than 1500 special products on our customers' request. Every single product is a challenge for our technical team. We at **SAB** Bröckskes see ourselves as manufacturer and service provider - in the sense of real partnership and customer oriented work.

The quality of our products is known in more than 40 countries worldwide. Our customers have tested our products intensively and confirm that they have a longer service life than others. In all product ranges we are certified acc. to ISO 9001:2008. Besides we established an environmental management system for our company acc. to ISO 14001:2004, an occupational health and safety management acc. to NLF/ILO-OSH 2001 and OHSAS 18001:2007 as well as an energy management system acc. to DIN EN ISO 50001:2011. And our future slogan is:

WE GO FORWARD!

FOUNDED:	1947 by Peter Bröckskes sen. an independent, medium-sized company.
CEO:	Peter Bröckskes and Sabine Bröckskes-Wetten
PLANT/LOCATION:	In Viersen (Lower Rhine) 110.000 m ² company site. Own manufacturing from copper conductor to outer sheath. VDE proofed burnchamber and laboratory within the company.
EMPLOYEES/WORKERS:	Approx. 420 at the plant in Viersen, 500 worldwide
YEARLY SALES:	Approx. 95 Mio. € worldwide
PRODUCTS:	Special Cables Temperature Measurement Cable Harnessing
CERTIFICATES AND APPROVALS:	<div> <div>     </div> <div> <p>MIL, VDE, HAR, IEC, GL, DNV, BV, KR, ABS, NK, RINA, LR, CÉ</p> </div> </div> <p>Quality management system acc. to ISO 9001:2008 for every manufacturing field</p> <p>Environmental management system acc. to ISO 14001:2004</p> <p>Occupational health and safety management acc. to NLF/ILO-OSH 2001 and OHSAS 18001:2007</p> <p>Energy management system acc. to DIN EN ISO 50001:2011</p>

1947

Foundation of the company
by Peter Bröckskes sen.
in Süchteln (Lower Rhine) Germany.

Production of component parts
for telecommunications
and low-voltage technology.

1950

Start of thermocouple and
resistance thermometer production.

1958

Start of cable production
(8 employees).

1966

Foundation of
Câblerie SAB in France
(Fusion of JPM Câbles
and Eku Câbles).

1997

SAB celebrates
the fiftieth anniversary
with the subsidiaries.

1979

Expansion of the company area
(120 employees).

1989

Death of Peter Bröckskes sen.,
Peter Bröckskes takes over the management.

1990

Presentation of the cable track cable,
type SAB-S 100 on the Hanover Fair.

1992

Export to over 40 countries
(300 employees).

1994

Certification quality management system
according to ISO 9001:2008.

Start of cooperation with JPM Câbles
in France.

1995

Presentation of the unique novelty "SABIX®"
halogen-free cables with technical advantage.

Foundation of Kabelspecialist Bröckskes
in the Netherlands.

Start of wire and
cable harnessing.

1998

Expansion of the company area
to 110.000 m² and erection
of a logistic center.

Start of partnership with
AUXICOM in France.

1999

Foundation of a sales office
in the United States,
SAB North America.

2004

Foundation of a sales office
in China, SAB China.

Start of partnership
with Kabel México SA.

2005

Beginning of the partnership
with Thomas Cable Company in Korea.

Certification environmental management system
according to ISO 14001:2004.

2006

First representation in India.

2007

SAB celebrates
the sixtieth anniversary.

2008

Certification occupational health and safety management
according to
NLF/ILO-OSH 2001 and OHSAS 18001:2007.

2009

Sabine Bröckskes, daughter of the
Executive Director Peter Bröckskes,
takes over
the Technical Management
at SAB Bröckskes.

2011

Building of the new
KANSA-production hall
for wire and
cable harnessing.

Certification energy management
system according to
DIN EN ISO 50001:2011.

Sabine Bröckskes is new
shareholder of the
SAB-group.
Peter Bröckskes
remains Chief
Executive
Officer.

2012

Start of partnership
with Pozitron in Russia.

2013

Start of partnership with BERUF in Brazil.

2015

Start of partnership with Alltronix in India.

Start of partnership with
Precision Technologies in Singapore.

OUR CABLES AT A GLANCE

WE DEVELOP AND PRODUCE **CABLES AND WIRES**
AS WELL AS **SPECIAL SOLUTIONS**
PARTICULARLY ACCORDING TO YOUR REQUIREMENTS AND APPLICATIONS.

Conductor Materials

- Bare copper
- Tinned copper
- Silver plated copper
- Nickel plated copper
- Nickel
- Nickel pure
- Compensating cable alloys

Conductor Sizes

- 0,14 mm² - 300 mm²
- variety of stranding styles

Insulation and Jacketing Materials

- PVC (varietals)
- Polyethylene
- Polypropylene
- TPE
- Fibreglass/SABTEX
- Besilen®/Silicone
- Pi foil
- FEP, ETFE, PFA, PTFE
- SABIX® zero halogen
- Polyurethane

Conductor Count Ranges

- unshielded - up to 125 conductors
- shielded - up to 100 conductors

Temperature Ranges (based on material)

- Thermoplastic Elastomers -50°C up to +145°C
- Besilen®/Silicone -40°C up to +220°C
- FEP, ETFE, PFA, PTFE -90°C up to +260°C
- Halogen-free -50°C up to +220°C
- Fibreglass/SABTEX up to +600°C

Shielding and Braiding Materials

- Bare copper
- Tinned copper
- Galvanized steel
- Stainless steel
- Aluminium foil
- Fibreglass
- Aramid

Approvals

- UL, CSA, JET, CCC, CE, MIL, VDE, <HAR>, IEC, GL, DNV, BV, KR, ABS, NK, RINA, LR



OUR TEMPERATURE MEASUREMENT AT A GLANCE

WITH US YOU GET **TEMPERATURE MEASUREMENT**
AND **ACCESSORIES** FOR A WIDE VARIETY OF REQUIREMENTS AND INDUSTRIES.

Protecting armatures and gauge slides

- Immersion protecting armatures
- Screwed protecting armatures
- Welding protecting armatures, etc.

Temperature measurement in test vehicles

- Thermo 8-plug connector
- Dipstick thermocouples
- Thermocouples for cooling water tube applications, etc.

Mineral insulated thermocouples/ Mineral insulated resistance thermometers

- with fixed connecting cable
- with bare connection ends
- with thermo-plug/miniature plug, etc.

Temperature measurement in plastics processing industry/Hot runner technique

- Hot runner mineral insulated thermocouples
- Plug-in thermocouples
- Molten mass thermocouples, etc.

Probe with stainless steel sleeve

- available as thermocouple
- available as resistance thermometer

Compensating and extension cables

- Compensating and extension cables for thermocouples
- Connection cables for resistance thermometers, etc.

Accessories

- Clamping screw connections
- Flanges
- Screw sockets
- Connection heads
- Welding protecting tubes
- Transmitters
- Thermo-plugs/sockets
- Screw-in nipples
- Miniature plugs/sockets



AT A GLANCE

CABLES AND WIRES

- helix cables
- harnessed cables acc. to customers' specification

- cable harnesses
- harnessed motor and transmission cables for Siemens and Indramat drives
- harnessed track cable
- various combinations of connector types and terminals
- many application of various materials and sheath materials
- complete solutions
- high quality standard by continuous quality control



SOLUTIONS

You need assistance - we act fast and competently
Our expertise - your solution

SERVICE AROUND THE CLOCK

Optimal support at any time
Your direct wire to our service team
For emergencies outside of our office hours
contact us under: **0049-173 / 28 68 408**

FLEXIBILITY

Productions starting from a length of 100 m
Cable development customized to your request

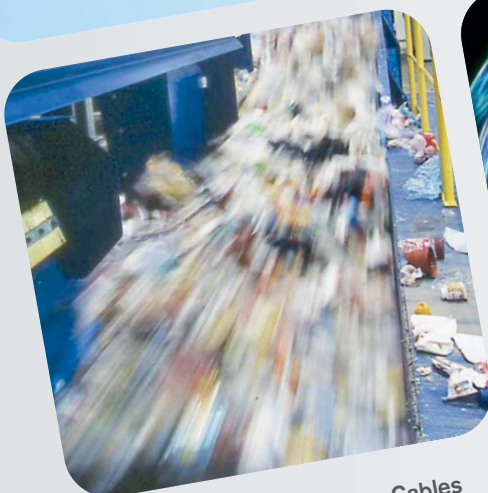
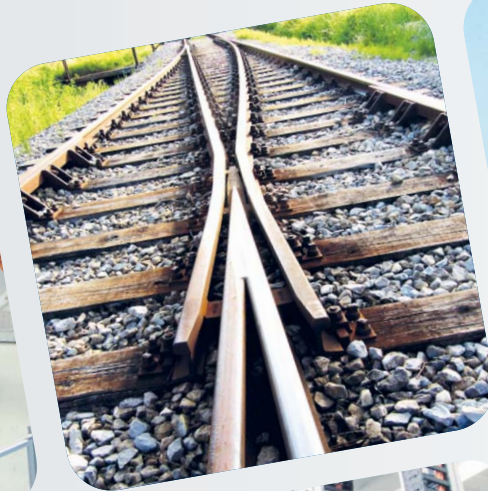
SPEED

From the development to the distribution in maximum speed

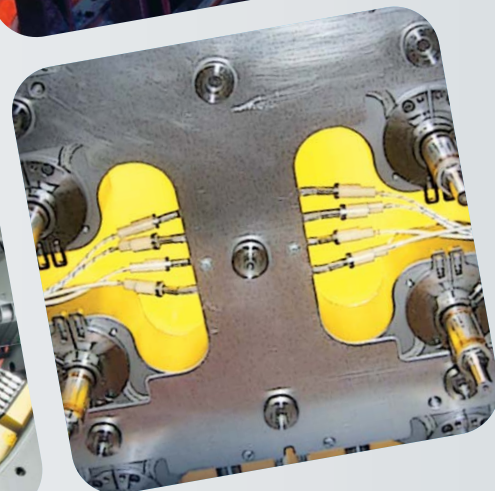
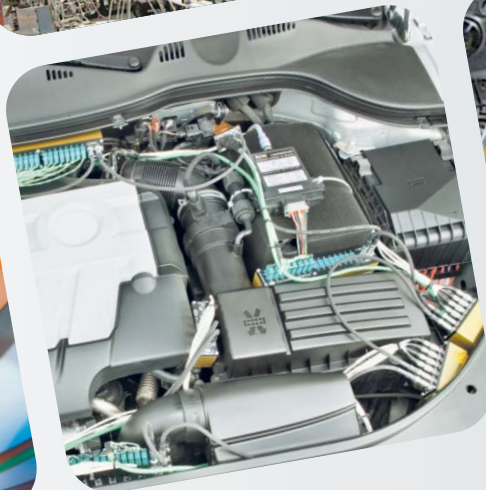
HIGH QUALITY

Highest quality by quality management system acc. to ISO 9001:2008
Environmental management system acc. to ISO 14001:2004
Occupational health and safety management acc. to NLF/ILO-OSH 2001 and OHSAS 18001:2007
Energy management system acc. to DIN EN ISO 50001:2011

INDUSTRIES AND APPLICATIONS



- ▶ Robot Cables
- ▶ Railway Cables
- ▶ Marine Cables for Shipbuilding
- ▶ Ethernet Cables
- ▶ Cables for Building and Utility Vehicles
- ▶ Automation Cables
- ▶ Cables for Airport Equipment
- ▶ Cables for Waste disposal
- ▶ Cables for the lamp and lights industry
- ▶ Cables for eTicketing systems



- Cables for Crane and Conveyor applications
- Cleanroom Cables and Wires
- High voltage measurement
- Lift Control Cables
- Reeling Cables
- Heat resistant Cables
- Thermocouples automotive industry
- Thermocouples plastics processing industry

INSIGHTS IN OUR PRODUCTION

Everything starts with copper. Is pulled into thin wires, it serves for the transmission of energy and data in short time. With over 500 employees worldwide develop, produce and market we annually more than 1500 special solutions. These, as well as our standard cables and thermocouples have been thoroughly tested in our test laboratory under the influence of our DIN norms. This gives you an indestructible product, because:

ON THE RIGHT CONNECTION IT ARRIVES!

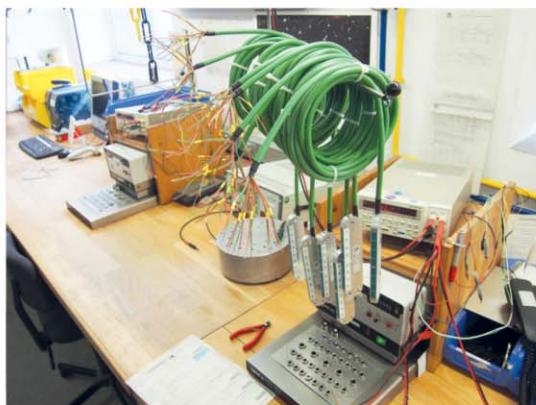
- Many years of experience as a cable specialist
- Outstanding customer service
- Customized solutions according to your special needs
- Excellent quality through continuous quality control
- Latest innovations in the cable and temperature measurement technology industry



... EVERYTHING FROM A SINGLE SOURCE



We develop and produce high quality cables and wires as well as special solutions that are particularly manufactured according to your requirements and for your individual application. You do not find the appropriate cable in our catalogue „Flexible Cables“, then please contact us! We will find the solution for you!



We offer an extensive range of thermocouples for various applications. These include, for example, the automotive and plastics industries. In addition our product spectrum includes resistance thermometers, temperature sensors, protecting armatures, gauge slides and mobile high-voltage measurement technique. Our sensors are used for a variety of temperature measurements. Whether in test vehicles, machinery, or on hot plates, our temperature measurement technology allows you to perform precise measurements.



Our product range is rounded off with prefabricated cables and wires of our subsidiary KANSA Kabeltechnik. It does not matter if it is a standard or special product, we design and produce high quality cables as well as ready-made cables with plug. Our harnessed cables are used for the most different industrial applications. They are, for example, used in automobile industry, machine, plant and drive construction as well as in industries for household appliances.



YOU CAN TRUST OUR KNOW-HOW

Good results are not determined by luck and chance. However, years of experience, sophisticated technology, expertise, and ability to develop the new, to review and improve the existing are the key drivers of our success. Because innovation and further development of our products takes place constantly to round off our range of services and to strengthen and expand our position in the market. Through intensive research and development, through tests and trials, we make sure that all products are mature when they are introduced into the market.

New products are the result of close communication between customer, sales, R&D department, laboratory, and supplier of raw materials. **SAB BRÖCKSKES** has all the information required by the VDE test procedures as well as numerous international certifications. In addition, we use many other testing equipments, such as the self-developed alternating bending testing machine for extreme hardness and long-term tests. We stand by the quality of our products and thus, gain the trust of our customers.



WITH BEST RECOMMENDATIONS: OUR REFERENCES

CUSTOMERS	AREAS OF APPLICATION	SAB PRODUCTS
ABB	Robot industry	Special cables, Control cables
Audi	Automobile industry	Hybrid cables, Special construction, Mineral insulated thermocouples, HV elements
BMW	Automobile industry	Hybrid cables, HV elements, Mineral insulated resistance thermometers
Bosch	Automation	Special cables, Thermocouples
Caterpillar	Construction vehicles	Special cables
Daimler	Automobile industry	Halogen-free control cables, Special cables, Cable track cables, HV elements
Disneyland	Theme park	Lift cables
Enercon	Windpower	Special cables
Knorr-Bremse	Railway technology	Special cables
Kone	Escalators	Halogen-free cables
KUKA	Robot industry	Special cables, Control cables
Liebherr	Automation, Crane systems	Servo motor cables, Special cables
Magna	Battery systems	HV elements, Mineral insulated thermocouples
Mammoet	Hoist and transport technology	Special cables
Manitowoc	Crane systems	Special cables
Meyer Werft	Shipbuilding	Control cables, Data cables
POSCO	Steelworks	Reeling cables, Festoon cables
PSG	Hot runner technique	Hot runner thermocouples
Samsung	Semiconductor technology	Special cables
SIEMENS	Automation, Railway technology	Servo motor cables, Halogen-free control cables
Siempelkamp	Press manufacturer, Lumber industry	Special cables, Mineral insulated resistance thermometers
SMS	Automation, Producer of industrial plants	Special cables, Compensating cables, Mineral insulated thermocouples
Volkswagen	Automobile industry	Hybrid cables, HV elements
ZPMC	Container cranes	Lift cables, Spreader cables

WE ARE AT YOUR SERVICE, WHEN YOU NEED US ...

From our central stock in Viersen-Süchteln or our external stocks, we supply standard lengths as well as special dimensions, often within 24 hours. It is our strength to be at different places at the same time. This shows also our wide product range. Being always ready to deliver our products of constant quality is one of the premises at **SAB BRÖCKSKES**. Challenge, obligation - but also guarantee at the same time. This is your advantage - we are present whenever you need our assistance.

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Fax: +52 33 36 84 3976
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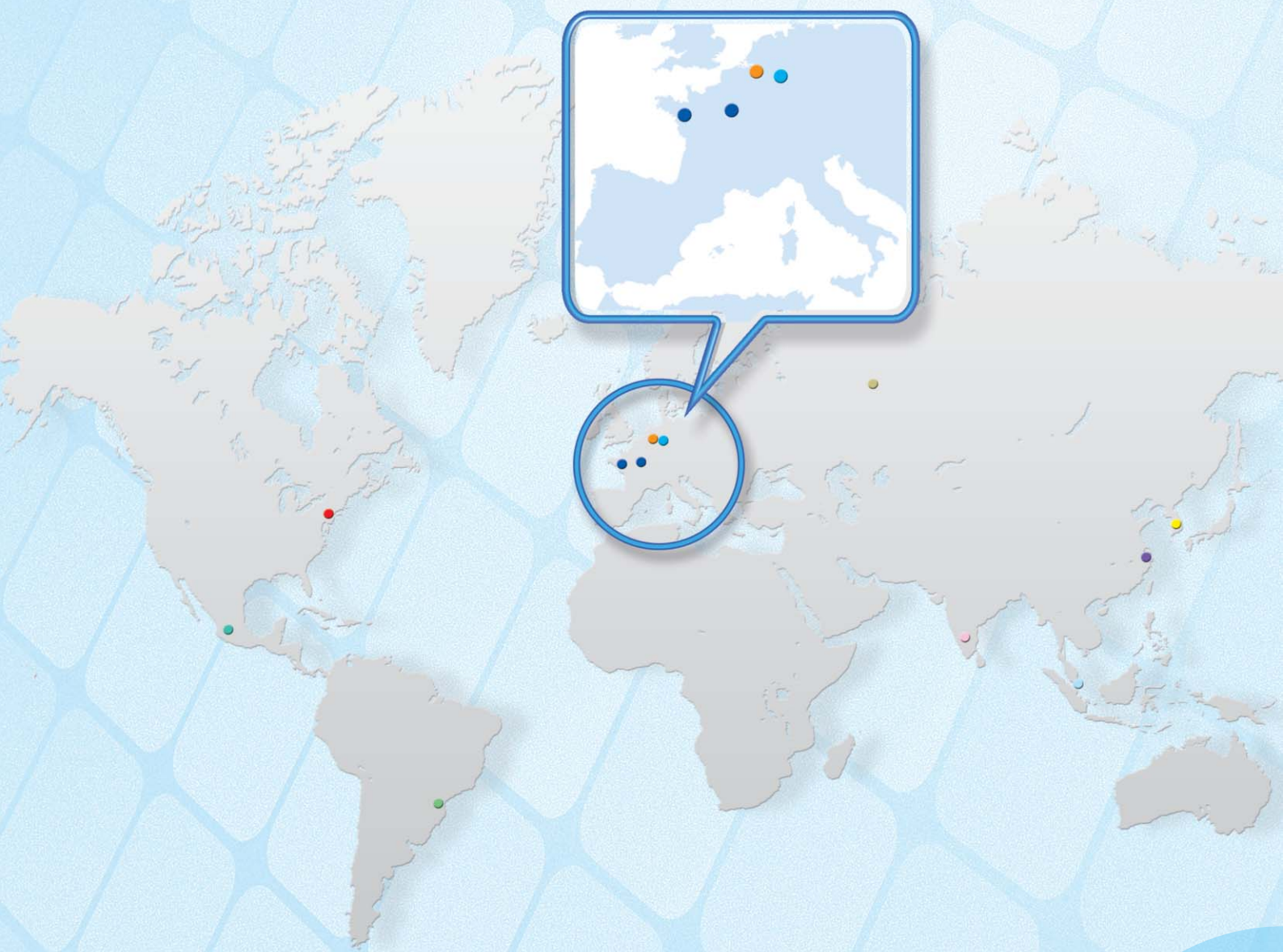
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WORLDWIDE

WE TAKE THE **SHORTEST WAY**
FOR **INDIVIDUAL SOLUTIONS.**



WE THINK AHEAD AND WE TRAIN

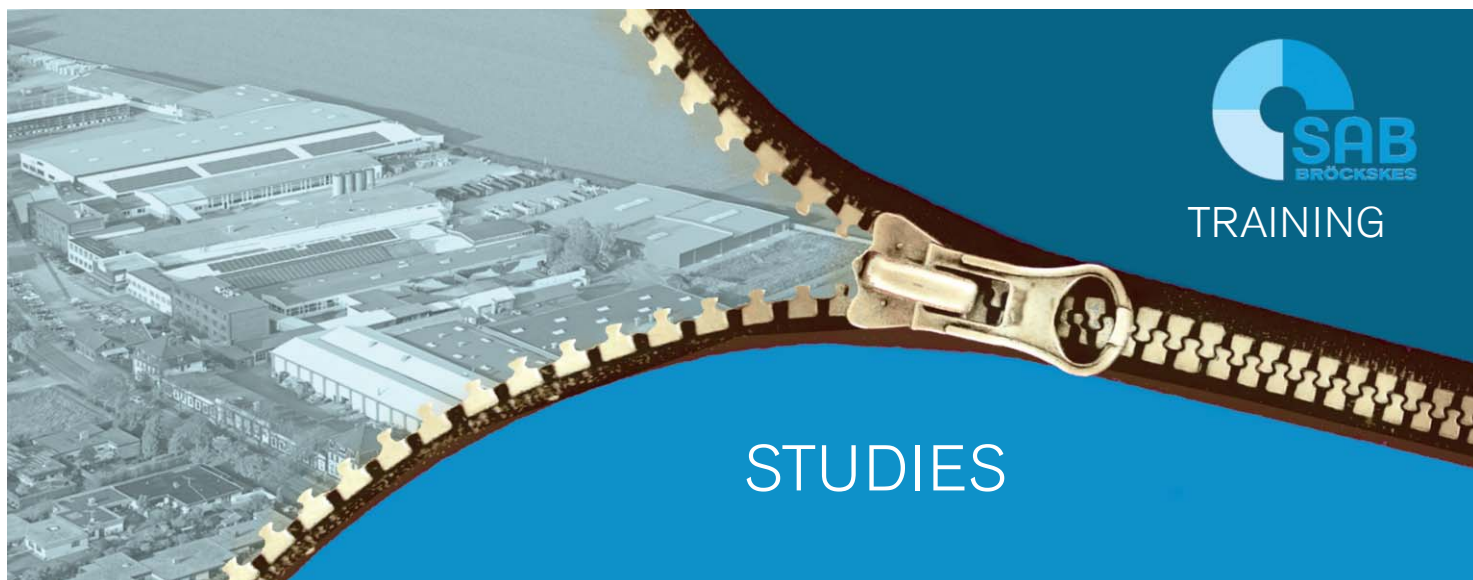
We place great emphasis on practical training with promising future prospects. We offer extensive training options from industry/technology (cable production and industrial mechanic) through to the commercial area (industrial manager). In addition to the weekly vocational school, we support our trainees with internal as well as external training courses in order to ensure that you receive the optimal preparation for your career path. Our trainees have already been among the country's best for three training generations. In 2013, **SAB BRÖCKSKES** received the award for the best training centre for the fifth time. Peter Bröckskes is very proud of the performance of the training centre at **SAB BRÖCKSKES**. „Our aim is to remain the top cable manufacturer in the future. A consistently high number of trainees ensures that the next generation of employees is adequately qualified and secures the necessary know-how and quality of our products as well as the desire for constant innovation“, says the Managing Director.



BEST TRAINING COMPANY

OUR TRAINEES ARE
SINCE THREE GENERATIONS TRAINING
AMONG **THE BEST IN GERMANY**





STUDIES

STUDIES AND TRAINING

With us, both is possible at the same time - a traineeship and simultaneous study for the following occupational areas:

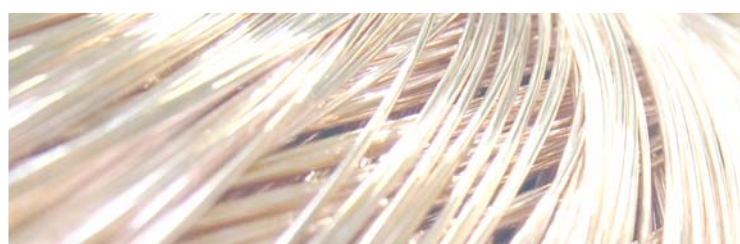
COMMERCIAL AREA: Bachelors Degree in Business Administration and simultaneous training as an industrial manager. Degree: Bachelor of Arts (B.A.).

TECHNICAL AREA: Bachelors Degree in Electrical Engineering and training as a cable production mechanic, based on the job description of a junior cable worker. Degree: Bachelor of Engineering - specialising in mechanical engineering.

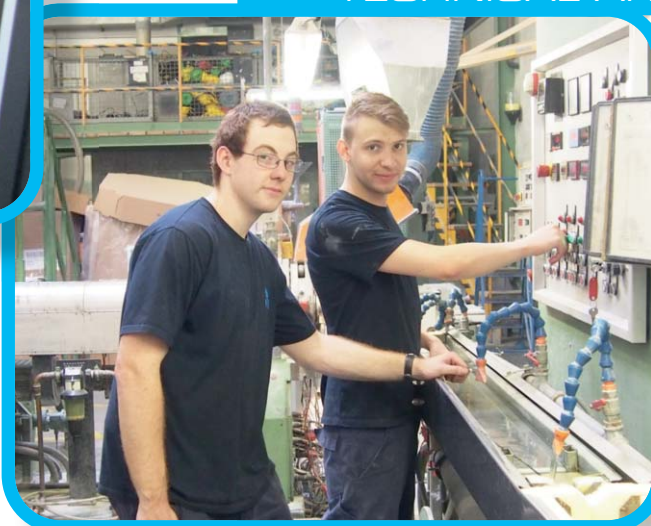
The standard course duration is four years. During this period, students attend university 2-3 days per week. On the other days trainees gain practical experience in the company. The intermediate examination and final examination are held at the Chamber of Industry and Commerce (IHK) together with the other trainees. The Niederrhein University of Applied Sciences in Krefeld started this training structure as a KIA (Co-operative Engineer Training) in cooperation with the Chamber of Industry and Commerce in 1982. The „Krefeld Model“ is now offered across the country. The course is completed with a Bachelors Degree as well as obtaining valuable practical experience during that period.

COMMERCIAL AREA

INDUSTRIAL CLERK



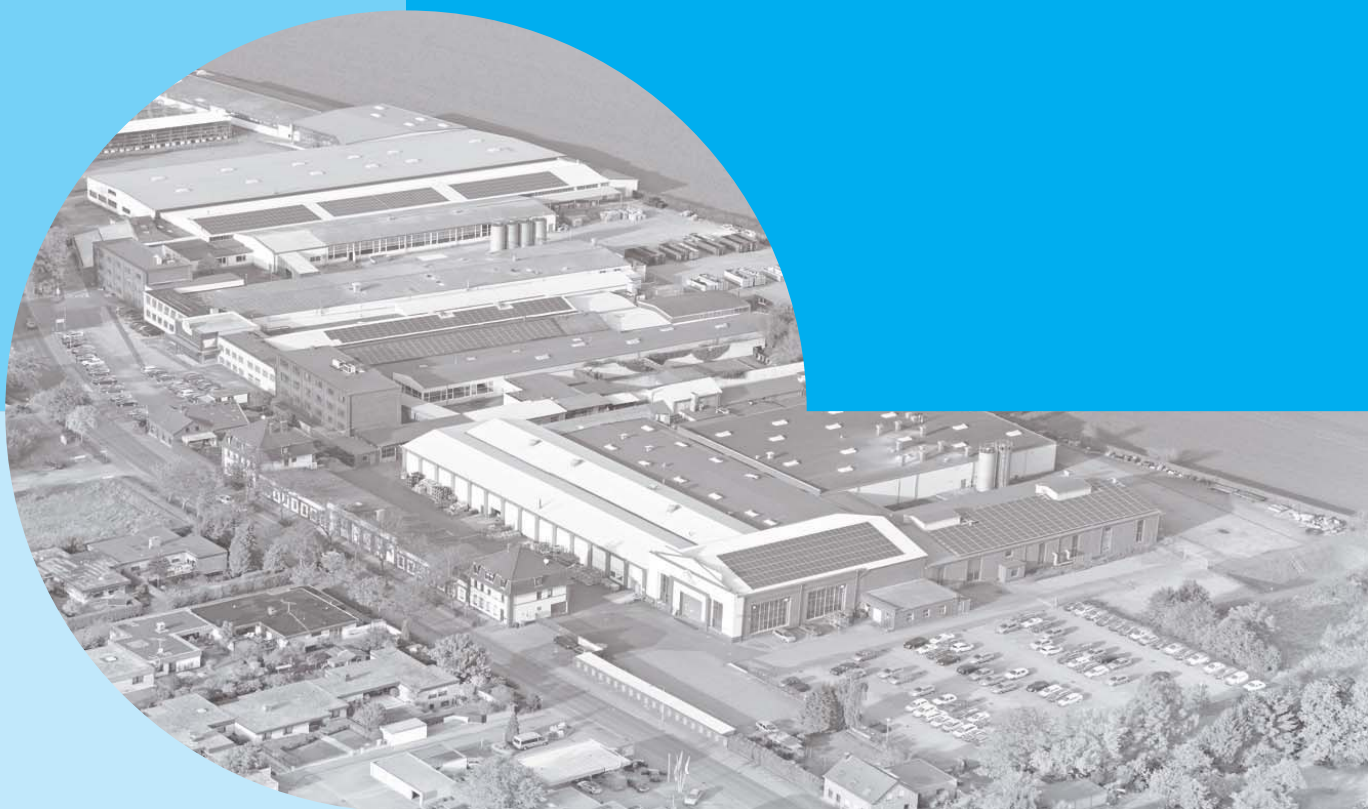
TECHNICAL AREA



JUNIOR CABLE WORKER

INDUSTRIAL MECHANIC

CABLE PRODUCTION MECHANIC



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