

# Seminars 2010

"An instrument is only as good as the person's knowledge to use it."



We have been successfully conducting the following seminars in many places of the world:

- E** Fault location in power networks
- T** Fault location in telecommunication networks
- W** Water leakage detection in water distribution systems
- S** Special seminars cable test vans and instruments

Training sessions are held in our seminar center in Baunach, Germany. Alternatively we offer on-site training sessions, where our trainers coach your specialists at your location.

**sebaKMT**

# Philosophy:

“An instrument is only as good as the person’s knowledge to use it”. With this in mind, we at SebaKMT have been conducting in technical seminars and practical workshops in modern cable fault and water leak detection for more than 60 years.

## Fault location in power networks



**Duration:** 4 days

A seminar offering participants basic know how – both theoretical and practical – on fault location on power cables.

### Syllabus:

- History and construction of cables
- Fault types, electrical and physical characteristics of faults
- Analyzing the fault, series or shunt fault, flashover fault, open circuit fault, ground contact fault, ingress of moisture
- Principles of cable fault location
- Insulation resistance and fault resistance measurement
- Cable fault pre-location:
  - Time Domain Reflectometry (TDR),
  - Arc Reflection Method (ARM),
  - Impulse Current Measurement (ICE),
  - DECAY measurement
- Pinpoint location of faults and marker location
- Sheath testing and fault location
- Line tracing

- Cable and phase identification
- Cable test vans and systems
- Different maintenance strategies
- Testing of PIL and XLPE cables (VLF and DC testing)
- Diagnosis and partial discharge measurement
- Practical exercises

Dates	Languages
09. – 12.03.2010	Czech, English, Norwegian, Slovakian, Swedish, Russian
16. – 19.03.2010	Bulgarian, Polish, Croatian, Serbian, Slovenian
12. – 15.10.2010	Bulgarian, English, Norwegian, Swedish, Russian
05. – 08.10.2010	Polish, Hungarian, Croatian, Serbian, Slovenian

Fee: 1.520,- €\* (including VAT)

\* Hotel costs are not included

## Leak detection in water distribution systems



**Duration:** 3 days

Drinking water – our most vital commodity - is becoming increasingly important all over the world. Loss of water means an increase in costs.

A seminar aimed at specialists responsible for the organisation and maintenance of potable water systems.

### Syllabus:

- Defining water loss in potable water systems and classification of loss
- Strategies to counteract loss
- Introduction into the problem of water leak detection:
  - Basics of leak location
  - Operative and quantitative water loss determination
  - Theory of leak-noise propagation
- Flow measurement with IFM instruments
- Flow measurement with ultrasonic test instruments
- Suppression of interfering noise
- Leak location with frequency analysis

- Recording of leak noise
- Introduction of the correlator technique:
  - Explanation of the instruments and their basic functions
  - Functional limits
  - Different methods
  - GIS Applications
- Conducting measurements on different pipe materials, use of hydrophones
- Leak location with hydrogen, in-house leak location, new methods and instruments
- Location of metallic and non metallic pipes, pig location
- Marker location
- Practical exercises

Dates	Languages
30.06. – 02.07.2010	In line on demand

Fee: 1.250,- €\* (including VAT)

\* Hotel costs are not included

# Fault location in telecommunication networks

T

## Duration: 3 days

This seminar provides the participants with an overview of test techniques and fault location methods for telecommunication cables.

Integrated in the course are practical exercises and aspects of quality control.

## Syllabus:

- Principles of cable fault location
- Cable fault prelocation using reflectometers and bridge testers
- Measuring cable parameters, attenuation, noise and crosstalk

- Pinpoint location of faults and marker location
- Sheath testing and fault location
- Line tracing, cable and phase identification
- Practical exercises

Dates	Languages
30.06.–02.07.2010	In line on demand

Fee: 1.250,- €\* (including VAT)

\* Hotel costs are not included

## Special purpose seminars

S

We also offer training for cable test vans and other equipment, conducted either at the customers' premises or at one of our training centres.

Topics from various seminars may be combined.  
What's taught, for how long, and where? –  
The choice is yours.

**If you are interested in participating in one of our seminars, please contact your national SebaKMT company or your regional sales office.**

## Information

### Registration:

Registration requests will be processed in the order they are received, and we will provide written confirmation. The number of participants is limited. Data provided in the registration request will be saved in accordance with data protection regulations.

### Hotel:

Unless an alternative request is specifically stated, we will make a hotel reservation for you in Bamberg or Dresden at your cost. We will provide you with the address approximately one week before the seminar is scheduled to begin.

### Liability:

We assume no liability beyond what is legally required, and absolutely no liability outside of our company premises.

### Registration deadline:

After the maximum number of participants have registered, and at the latest, 4 weeks before the seminar begins (received by us).

### To bring with:

As our educational seminars include practical training outdoors and on our test course, we definitely recommend that you bring rainwear and sturdy footwear. You are welcome to bring your own test equipment. Otherwise we will provide the necessary practice equipment.

### Copyright protection:

All training manuals and documentation are provided for the sole and personal use of the participant.

### Modifications:

For important reasons, SebaKMT reserves the right to make changes to the content and structure if necessary.



**Reliable:**

Worldwide, we are the leading company for the development and manufacture of measurement equipment for diagnosis of the state of a network and for fault location. Our sectors of the market include electricity supply networks as well as communications and piping networks.

**High performance:**

We concentrate on four areas: diagnosis of the state of a network, cable fault location, leak detection and line location. We are thus in a position to offer high performance in each of these areas.

**Available:**

SebaKMT has representatives in 130 countries worldwide, with excellently trained staff and state-of-the-art technology. This means that we have the most comprehensive service and consulting network in the industry. Wherever your international activities may lead you, we look forward to contacting you or being contacted by you to you.

**Contact person for further questions regarding our seminars:**

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