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## IKT-Master Course

# Sewers and Pipelines – Construction, Operation and Maintenance

- 19-20 April 2017, Amsterdam
- 26-27 October 2017, Paris



This course uses core elements from a university master course by Professor Bert Bosseler, Scientific Director of IKT, supported by case studies from international standardization at CEN and ISO. The contents of this master course are part of the curriculum at the Ruhr-University Bochum and Leibniz University Hanover, both leading universities for civil engineering in Germany.

## Attendees

This master course is for international specialists, product and service providers who want to refresh their knowledge. You will have the opportunity to meet and network with attendees coming from all industry sectors: clients, contractors, designers, consultants, suppliers and manufacturers.



## Lecturer

Professor Bert Bosseler, Dr.-Ing. habil.,  
Scientific Director of IKT - Institute  
for Underground Infrastructure



## Agenda

### Day 1

Bert Bosseler, Scientific Director, IKT

- 9:00 **Welcome Address**  
**Open-cut method, Part 1**
- Construction practice and process
  - Structural design model, requirements from standards
- 10:30 **Coffee break**
- 11:00 **Open-cut method, Part 2**
- Flowable back-fill material
  - Reinforced-concrete pipes
  - Large-diameter plastic pipes
- 12:30 **Lunch**
- 1:30 **Trenchless construction**
- Technology/methods
  - Pipe jacking – construction process, technical risks, quality assurance
- 3:00 **Coffee break**
- 3:30 **Rehabilitation, repair and replacement, Part 1**
- Objectives, tasks, terminology
  - Repair: damage scenarios, methods
  - Renovation: methods, techniques, technical examples
  - Replacement: methods, pipe busting
- 5:00 **End of day 1**



### Day 2

Bert Bosseler, Scientific Director, IKT

- 9:00 **Rehabilitation, repair and replacement, Part 2**
- Structural integrity of CIPP liners: pressure lines, gravity lines
  - Surface preparation for rehabilitation
  - Manhole rehabilitation: IKT test results
- 10:30 **Coffee break**
- 11:00 **Operation and Maintenance**
- Water-tightness testing: test errors, probabilities, case study
  - Root growth and root „resistance“
  - Operational tasks: sewer cleaning (high pressure), odour controls (filters)
- 12:30 **Lunch**
- 1:30 **Management issues**
- UN/EU/ISO 268/SC1 Smart community infrastructure
  - Asset Management: ISO 55000 vs. ISO FDIS 24516
  - Defining „service-life“: materials, rehabilitation methods
- 3:00 **Coffee break**
- 3:30 **Best Practices and Discussion**
- 5:00 **End of day 2**

## Organisation



Dr.-Ing. Sissis Kamarianakis, IKT

## Dates and Fee

19-20 April 2017, Amsterdam  
26-27 October 2017, Paris

- standard fee: 890 Euro
- member IKT-associations: 790 Euro
- member KomNetAbwasser: at no charge

incl. training materials and catering

Become a member!

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[www.komnetgew.de](http://www.komnetgew.de)

## Venue

Amsterdam and Paris  
venues to be announced

## Host

IKT - Institute for Underground Infrastructure  
non-profit Institute  
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45886 Gelsenkirchen  
Germany  
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**Any Questions?**  
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## Registration

Registrations will be processed in the order they are received. There are limited seatings available. Early registration is therefore recommended.



[www.facebook.com/IKTonline](https://www.facebook.com/IKTonline)

### Registration

please send this form to fax: +49 (0) 209 17806-88 or e-mail: [seminare@ikt.de](mailto:seminare@ikt.de)

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Participant \_\_\_\_\_

Company/Authority \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ Postcode \_\_\_\_\_

State \_\_\_\_\_ Country \_\_\_\_\_

Phone \_\_\_\_\_ Mobile phone \_\_\_\_\_

E-mail \_\_\_\_\_

E-mail Participant (if different from above) \_\_\_\_\_

Date \_\_\_\_\_ Signature \_\_\_\_\_

Registrations will be processed in the order they are received. All registrations are legally binding. After your registration the invoice will be issued. The payment has to be made in advance. In case of cancellation until 14 days prior to the event a cancellation fee of 30 % of the participation fee will be charged. Thereafter, or in the case of non-attendance the full fee is to be paid. Cancellations will be accepted only in written form. A substitute participant for the booked date can be specified in writing at any time (free of charge). A transfer to another event date is possible only six weeks prior to the booked event. A rebooking fee of 250 Euro applies.