Inspecting pressure sewer pipes: Potential, requirements and results

Test rig: IKT research on inspection and condition-surveying of pressure sewer lines

Pressure sewer pipes are well down a sewer operator's list of their favourite parts of the network. Because there are **no inspection or maintenance ports**. Because the precise location of the pipe is often not known. Because **numerous bends** obstruct the flow. They can be found in practically all drain and sewer networks, but their characteristics and their special design confront sewer network operators with a **real challenge** when it comes to inspection and condition surveying.

Legal provisions

Pressure sewer lines are subject to the legal provisions concerning **inspection** and **condition survey**, as defined for example in German federal states' regulations for self-inspection and **self-monitoring**. Sewer network operators frequently find themselves facing special challenges in implementing the required inspection work. High points and low points with no valves complicate draining and venting. There

is a **danger of blockages** of the gravity system if pump operation is interrupted, with the potential for **back-ups** and flooding.

IKT research project

The IKT research project “Inspection and condition-surveying of pressure sewer lines and culverts”, which was conducted by IKT jointly with more than twenty sewer network operators, found that **life-cycle observation** of pressure sewers is becoming ever more important. The main results provide sewer network operators and technology suppliers with better understanding of the requirements for **inspection technologies**, the performance of **water tightness tests** and the selection of **rehabilitation methods** for pressure sewer pipes. A qualitative **risk model** for prioritizing pipe-specific inspection, which is already being used by operators, is also discussed.

Research Project: Pressure Sewer Lines

Read the whole article with key research results (PDF, 7 pages)

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Manhole Rehabilitation: Comparative testing of 13 different methods

On-site installation conditions simulated in IKT's large-scale test facility

Can **wastewater manholes** be rehabilitated so that they remain **permanently watertight**? What are the benefits and the drawbacks of mortar coating, plastic coating and lining. What quality can be expected? This first **comparative product test** in this field gives you the answers!
"Now for the manholes" – this is a train of thought in the repair/rehabilitation departments of many wastewater network operators. There is, indeed, little point in rehabilitating wastewater pipes without paying attention to the **numerous defective manholes**. This is particularly true in water infiltration zones, since a really watertight sewer network can only be achieved provided the manholes are also rehabilitated.

Under test: thirteen manhole rehabilitation methods

Which of the many manhole rehabilitation methods should we

choose? Which one will seal **reliably and durably**? Which is suitable in which situation, and which are not suitable? Thirteen commercially available methods have now been **analysed** in IKT‘s “Manhole Rehabilitation” Comparative Test. The **results** range from GOOD to ADEQUATE, with one method failing the test.

Comparative Test: Manhole Rehabilitation

Read the whole article with all test results (PDF, 10 pages)

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IKT LinerReport 2015: Slight disappointment on wall thickness

Precision measurement necessary: wall thicknesses can differ

IKT’s LinerReport ranks the performance of both CIPP contractors and individual lining systems. CIPP-liner samples from six countries were tested. Results are still at high level. Only wall thicknesses are more frequently below target. Most non-German companies also score well. The report includes Austrian, Czech, Dutch, German, Swiss and UK results.
The report is based on 2,150 CIPP-liner samples taken for quality-control purposes on project sites and tested by the IKT CIPP Liner Test Centre in 2015.

Quality also good outside Germany

For some good time now, more and more results obtained from foreign site samples have been incorporated into the IKT LinerReport. Conspicuous here is the fact that, with a few exceptions, liner types supplied by German producers are mainly used abroad, too, and that the installation quality closely approaches that of the German refurbishing contractors. With only a few exceptions, foreign contractors were well able to hold their own against their German counterparts in the 2015 LinerReport.

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View all IKT LinerReports

More info on CIPP liner testing

Video: Webinar on IKT Research Activities 2015

IKT’s Scientific Director Bert Bosseler invited network operators as well as contractors and other organisations to a webinar on current IKT activities on **research, testing, education and networking**. He highlighted IKT´s **upcoming projects** for 2016/2017, too.

Topics covered:

- Reducing I/I – Infiltration and Inflow to sewers
- Pressure pipe lines in sewer systems
- Optimising sewer cleaning
- Manhole rehabilitation
- Repair of lateral connections
- Flow control units at rain water basins
- Liquid soils for pipe installation
- Sewer lining testing

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Webinar: Update on IKT Research Activities 2015

Webinar at IKT

IKT invites network operators as well as contractors and other organisations to a webinar taking place on Monday 9 November 2015. During this 45 minutes' webinar update, IKT's Scientific Director, Bert Bosseler, will give an **overview** of current IKT activities on **research, testing, education and networking** as well as highlighting our **upcoming projects** for 2016/2017.
Topics to be covered:

- Reducing I/I – Infiltration and Inflow to sewers
- Pressure pipe lines in sewer systems
- Optimising sewer cleaning
- Manhole rehabilitation
- Repair of lateral connections
- Flow control units at rain water basins
- Liquid soils for pipe installation
- Sewer lining testing

The webinar will start at 2pm London / 3pm Berlin.

more information and how to join

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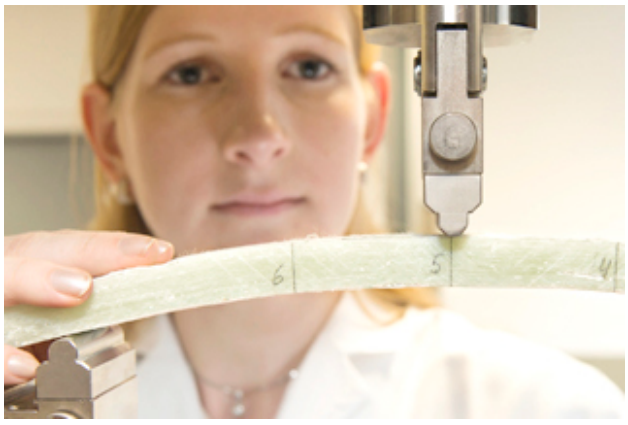
IKT LinerReport 2014: Use of CIPP liners expanding in Europe



Three-point bending test on a CIPP liner

Liner **quality** continues to be **high**. Slight **improvements** over last year. CIPP lining gaining in importance in **Europe**, accompanied by increasing quality awareness. Liner Report 2014 includes Dutch, Austrian and Swiss results.
IKT is pleased to present its LinerReport, for the **eleventh year**. This report is based on nearly **1,800 CIPP-liner** samples taken for Quality Control purposes at installation sites and

tested by the **IKT Test Centre** for CIPP liners during 2014.

A market trend is becoming apparent showing the use of CIPP lining **expanding** in Europe. Although Germany remains the largest market for this method, it is gaining significantly in popularity in other western European countries. This is reflected in this LinerReport with nearly **30%** of the **site samples** tested originating from **outside Germany**, compared with less than 15% last year.

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