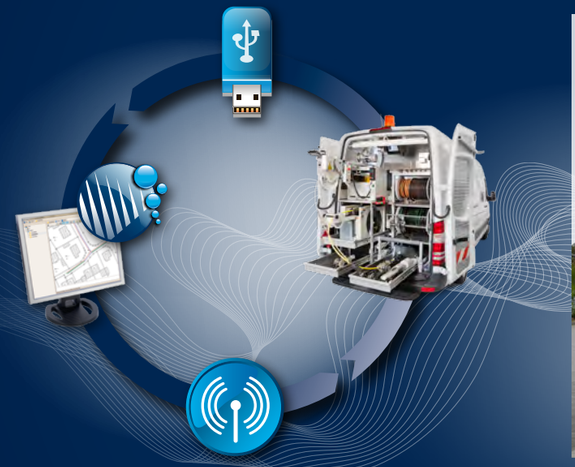
IBAK

IBAK IKIS

The sewer information manager

IKIS – the sewer information manager



Sewer TV inspections tour presets (master data, photos, plans) Archiving inspection data with videos and photos over histories of any length.

Tour settings for cleaning and flushing vehicles (master data, photos, plans). Archiving such cleaning data as flushing pressure, water consumption, etc.

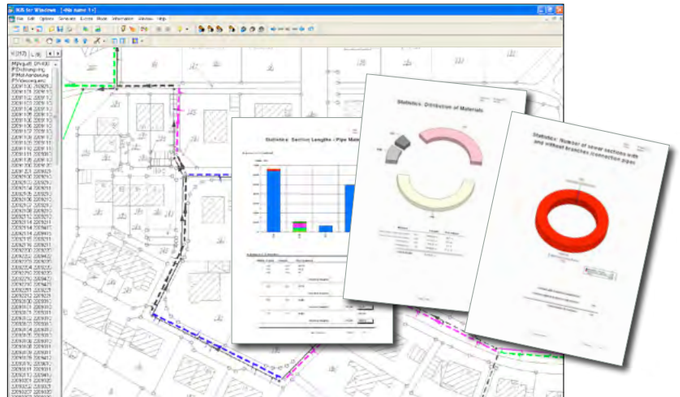
The IKIS sewer information system provides support for network operators and service providers in their oversight of sewerage systems. The software is specialised in sewer operations and provides current information at all times on the state of the sewer network on the basis of sewer inspections, cleaning operations and assessments that have already been completed.

The basic functions of IKIS include data settings for TV inspections, cleaning and renovation tasks, reading, saving and evaluating operational data, photos, films and documents, documentation of work completed and graphic display of the position and condition of the sewerage network.

The sewer database offers easy access to all saved data and comes ready equipped with an easy-to-read sewer network graphic, which shows sewer objects with the aid of background plans and aerial views on the basis of vector and grid files. All the detailed data belonging to a sewer object can be viewed on the graphical user interface with a few simple mouse clicks, and can then be edited where required.

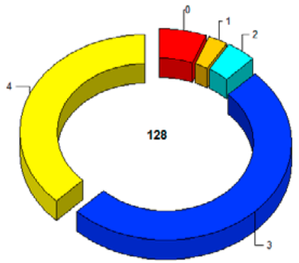
Easily understood statistics and reports document the current status of the individual sewer objects and support the user when evaluating, monitoring and checking the whole sewer network. For analyses affecting multiple sewer networks, IKIS produces a data transfer file for geo-information systems.

IKIS can be installed either locally using a single workstation license on a desktop PC or on a multiple-workstation client-server environment. Its network architecture facilitates access from several workstations at a time. Each IKIS workstation can be adjusted to suit its individual operational requirements. Data are managed within a high-performance SQL Server system. Thus IKIS can be used as a video server, for example.



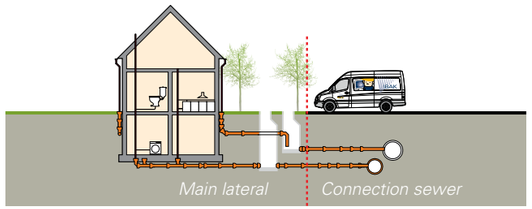
Modules for the variants including different equipment are listed. Contact us to get a personalised quotation.

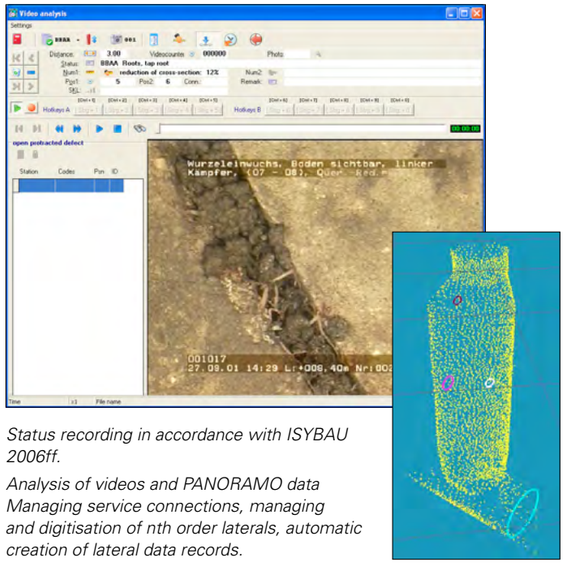
Defect classes according to operational safety classification EN 13508 / M149-3



Status classification and renovation planning

0	0	0,0%
1	8	6,3%
2	3	2,3%
3	5	3,9%
4	64	50,0%
Summe:	48	37,5%
	128	100,0%

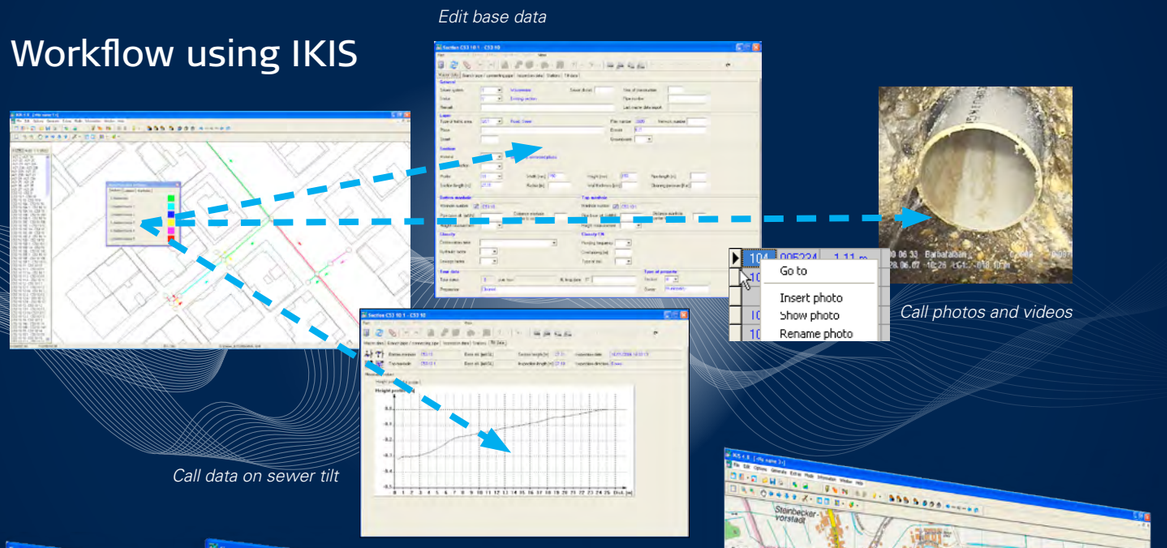


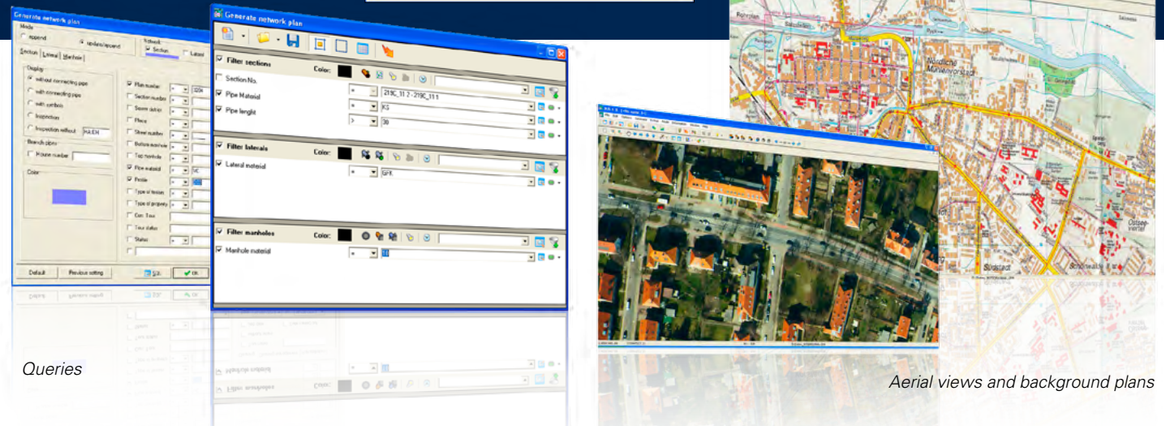


Status recording in accordance with ISYBAU 2006ff.

Analysis of videos and PANORAMO data Managing service connections, managing and digitisation of nth order laterals, automatic creation of lateral data records.

Workflow using IKIS

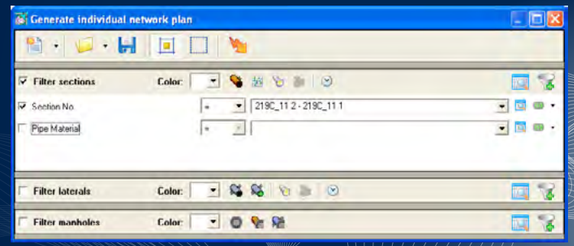


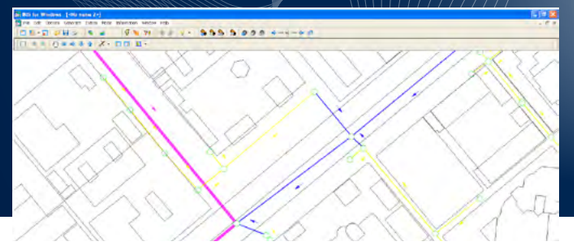


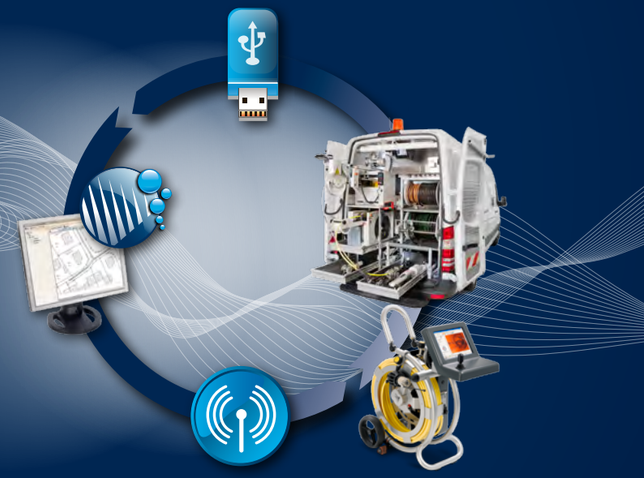
Viewing and managing data is very easy using IKIS. A topic-related network graphic is created on the basis of request filters with very freely configurable settings; for example, sections according to material, year of construction, defect classes or need for renovation. Geo-referenced DXF, TIF or JPG maps can be used for background plans and aerial views.

By clicking on the sewer object you need in the network graphic, you can directly access the relevant inspection photos and films (in MPEG or PANORAMO format), metrics, such as tilt and data entry dialogs for detailed base and inspection data on the sewer. Additional documents, such as PDFs or JPG images, can be easily assigned to the relevant sewer object using drag and drop.

Data settings for TV inspections





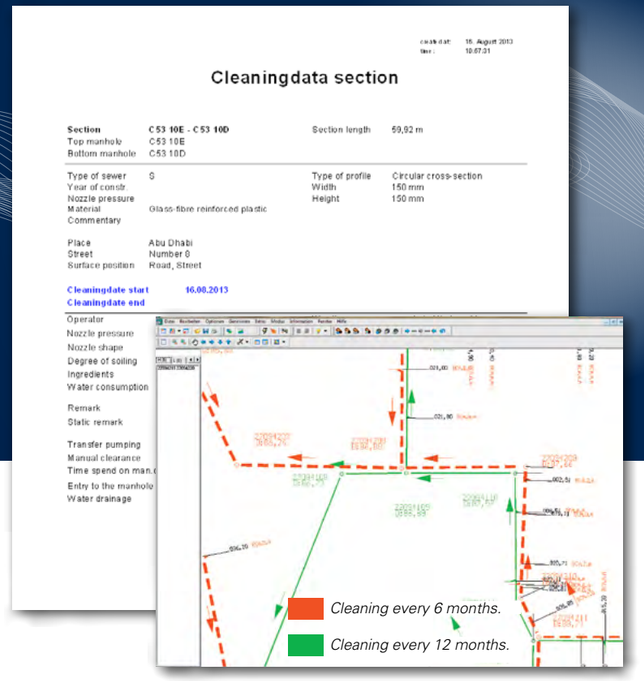


In order to ascertain inspection requirements, a request for the next inspection interval is initiated and the channel objects are displayed in the IKIS network graphical display. Then selected objects (sections, laterals, manholes) are exported along with all data required for inspection (master data, background plans, aerial views, etc.) and passed to the inspector. The data export function informs IKIS when and if a data export has taken place.

If the task has been completed, the newly created inspection data are assigned and archived automatically in IKIS with the help of the Import Wizard. This closed data cycle guarantees that IKIS provides consistently high-quality data.

Coding and reference tables (e.g. ISYBAU XML) are set out precisely by IKIS. Thus master data such as section numbers or materials no longer have to be entered manually for TV inspections. The whole work process is thus faster, and possible sources of error are eliminated at an early stage.

The Cleaning module

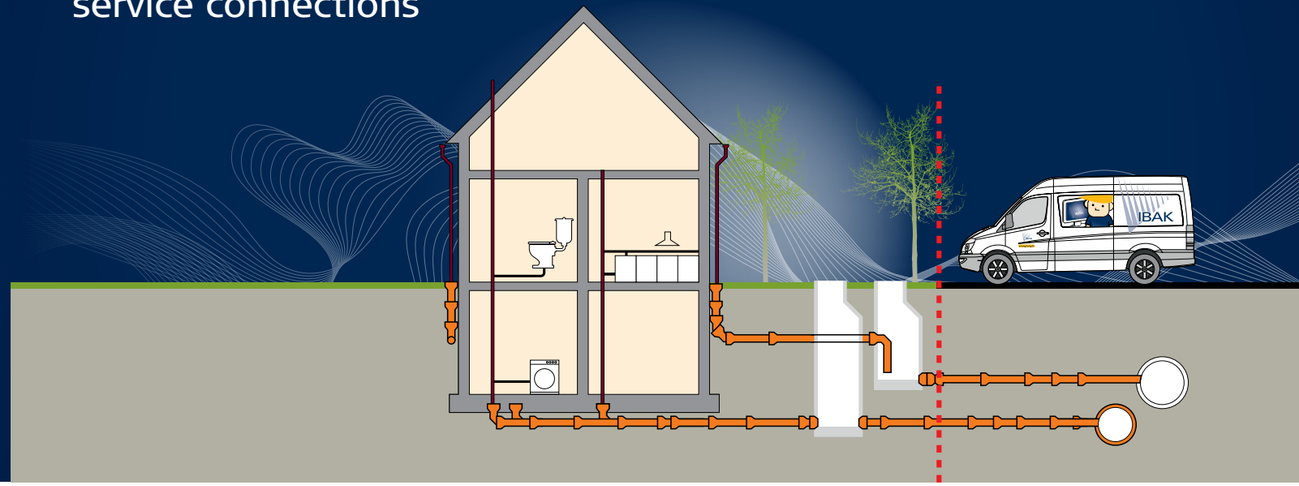


Using the Cleaning module, IKIS can also manage and support cleaning and flushing activities. The cleaning tasks required are assembled together by simply selecting the sewer network and passing the data for it to a flushing vehicle. Once all objects have been rinsed, the cleaning data created using the IKAS Cleaner are read back into IKIS*. Thus the sewer information system can be enhanced to include the data from the cleaning operation without much effort.

In addition a number of reporting functions are available as a proof of cleaning for accounts settlement, etc. The processed cleaning and flushing data are shown clearly in the sewer network graphic, and thus organised into a needs-based cleaning schedule.

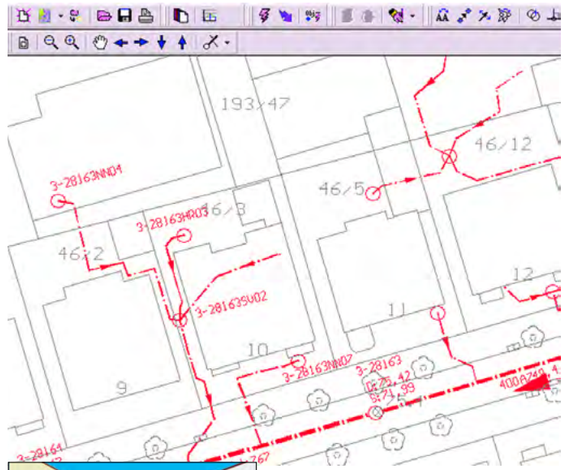
* IKAS Cleaner available as an optional extra

TV inspection of feed lines and service connections

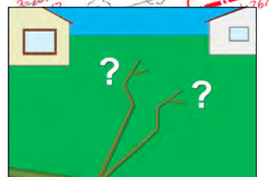


You can also manage the feed lines and GEAs for public, private and commercial premises using IKIS. The entire sewerage network, from inflow connection (whether it be a toilet, building, street inflow, etc.) all the way to the treatment plant, is contained in a single database.

For TV inspection of supply lines and service connections either master lateral data directly from IKIS or the main sewer data are used as parameters for TV inspection. New data records on laterals can be created at any time from connecting pieces and branches. If the TV inspection is also being used to determine the course of the feed lines being inspected (e.g. using the PLAN and NAVIGATOR modules for IKAS 32) then during the network graphics data import the new feed lines will be added into IKIS automatically.



Features
- Easy management of complex branched and curved laterals with any number of inflection points
- Automatic calculation of section lengths and of station data where changes are made to inflection points - Import of lateral data records from TV inspections; e.g. from an IKAS32 project.
- Automatic creation of lateral data records from joints and branches
- Easy assignment to a section using drag and drop or manual digitisation

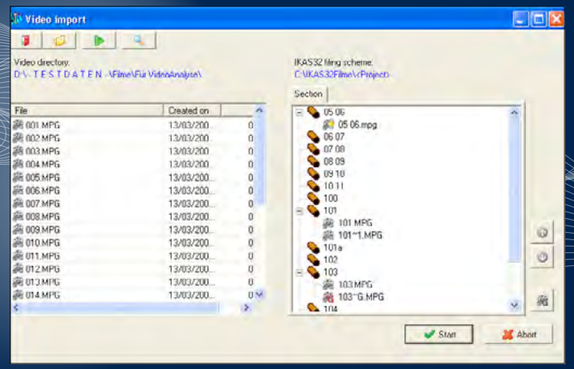


IBAK IKIS

The Video Analysis option

The connection is made between a film and its section or lateral record using a simple assignment process.
Any number of films can be assigned to any sewer network object in any order you wish to set.

The film is then evaluated during later analysis.



Import wizard

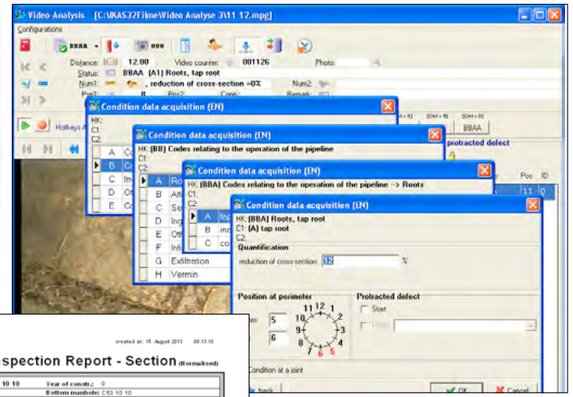
The inspection is recorded on site as a digital film using a simple recording device; e.g. an MPEG recorder. The coiler's length counter is shown or recorded for each station as the only information on the video image.

Films[1] created as described above or in a similar manner can be connected with IKIS using the **video analysis** option, and used to help create a qualified status report later. You thus receive status data for such downstream processes as evaluations, renovation planning, etc, even if nothing more than an MPEG film was created on-site.

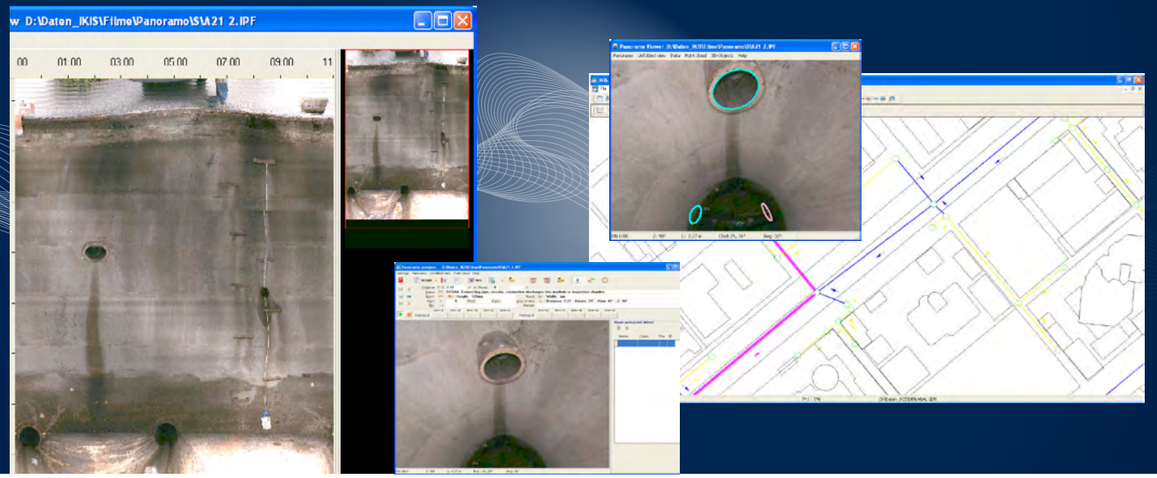
System requirements
The IKIS "Video Analysis" option
Inspection film [1]: MPEG 1, 2 or 4, DivX, ...
The distance value should be shown in the video for video analysis.
Windows XP, Windows 7
Operation using two-button mouse and keyboard.

1) All film formats for which there is a suitable decoder installed on the relevant computer are supported.

Performance range
Abbreviation selection (code assistant for EN13508)
Hot keys, facility for recording longitudinal defects
Individual digital images
Section graphic with inspection route
Measurement functions (water level, distance/area in pipe cross section)
Operation using two-button mouse and keyboard



PANORAMO Analysis

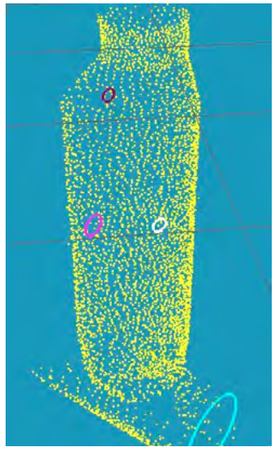


Using IBAK PANORAMO scanner technology, a number of fully 360° spherical images are made along the length of the pipe. The PANORAMO film is then made by combining the images. This film is a representation of the entire sewer pipe in which one can move virtually in any direction. Thus the pipe can later be examined at your work desk as if it were being inspected live on-site. There will thus no longer be areas left out by accident using PANORAMO technology, as happens with conventional TV inspections

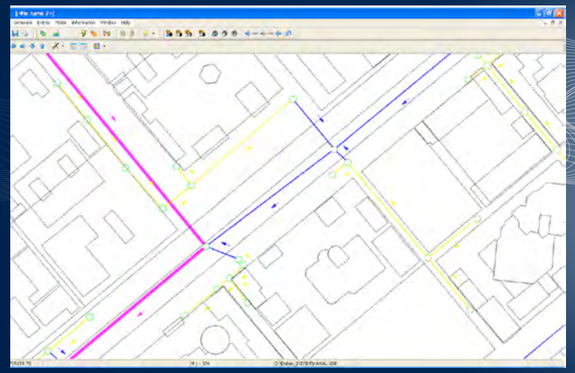
You can thus take downstream actions; e.g. renovation workers can look at the Panoramo film from a different point of view to the inspector who originally created it.

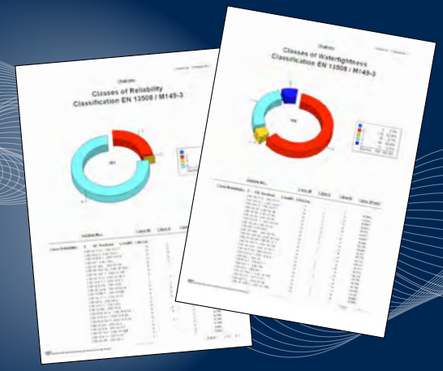
States of repair and defects recorded in manhole and sewerage conduit films can be reviewed at the work desk and written to the IKIS database. PANORAMO technology is available for filming sections and manhole chambers. Simply ask for further details on PANORAMO technology.

Features
Creates individual images
Measures distances / extent of damage
Distances on pipe walls
Distances, areas, water levels in pipe cross section, detection of reductions in diameters
Records longitudinal defects stretches of piping
Hot keys for commonly used abbreviations.
Automatic display of start of section at start of inspection
Displays additional information from the database on a PANORAMO film
PANORAMO SI: 3D display of manhole chamber in point clouds to show contours
Measure manhole depth using point clouds



Status classification and evaluation



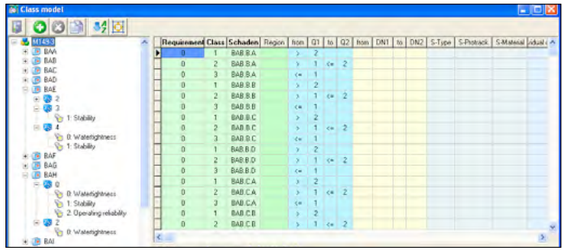


Wide-ranging reports and statistics

A classification in accordance with DWA-M 149-3 can be created by following a few easy steps. Inspection data recorded in accordance with DWA-M 149-2 are considered. Other classification models for other EN coding systems and other models following ATV can be created where required.

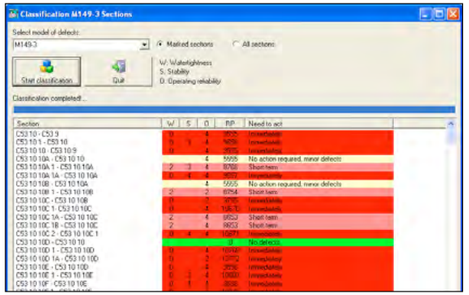
The classification is completed automatically according to the appropriate set of rules The basic conditions required for the evaluation must be entered. The result will include statistics on the need for renovation, status evaluations and need for intervention presented in tabular form.

The colour coding of the various status evaluations will allow objects needing urgent intervention to be identified immediately.



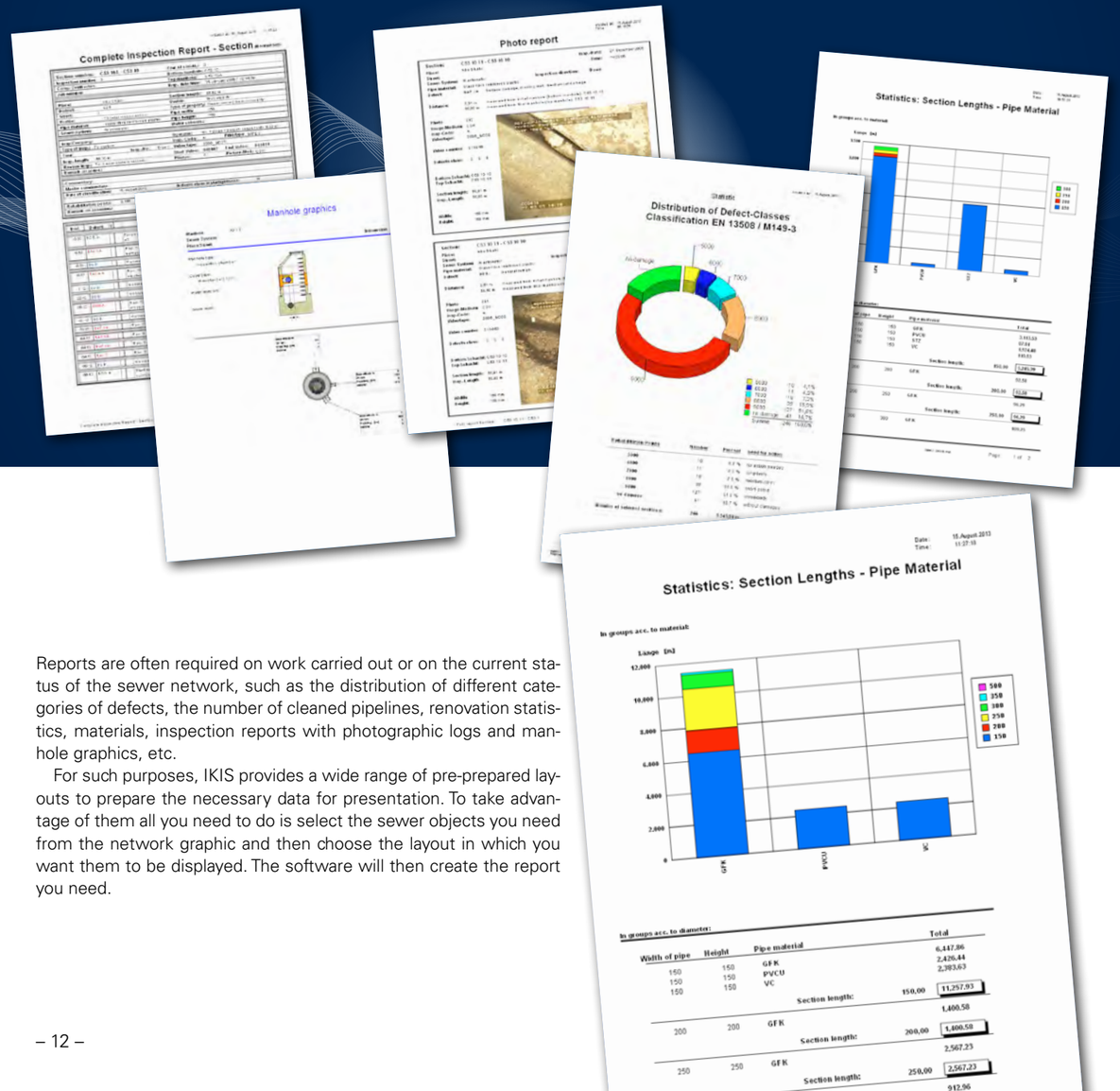
Class model (editable)

Features
- Easy and quick operation
- Classification of sections, laterals and manholes
- Automatic recording of key conditions from the master data
- Automatic classification
- Easy procedure for dealing with special cases
- Clear display of results with colour coding for status evaluation
- Output of classification results in extensive reports and statistics
- Editable class model



Classification dialog with display of results

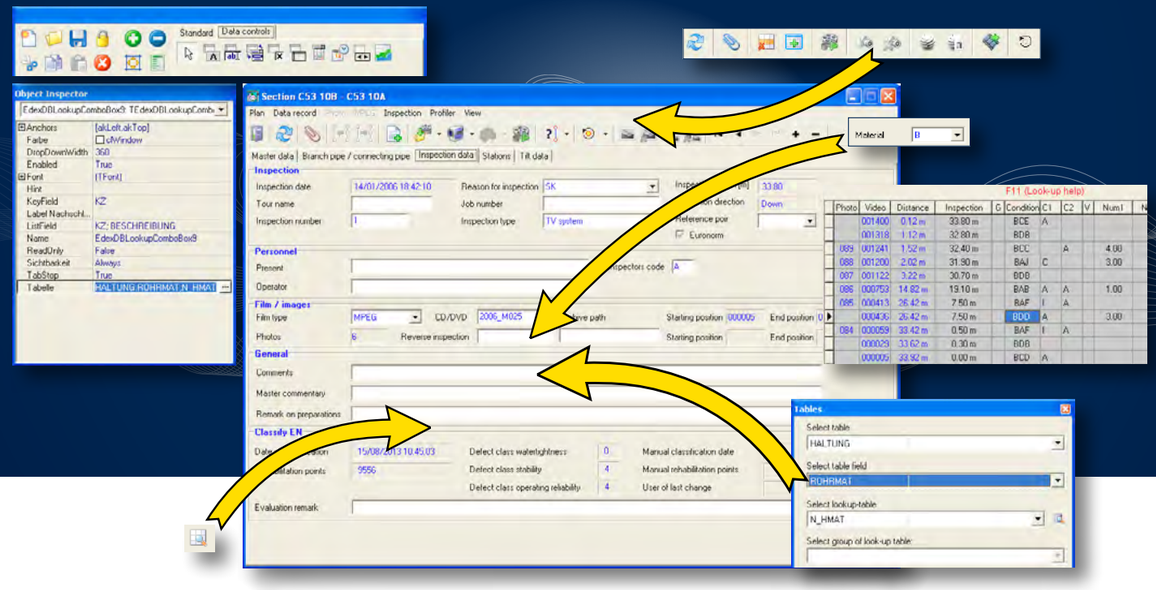
Reports and statistics



Reports are often required on work carried out or on the current status of the sewer network, such as the distribution of different categories of defects, the number of cleaned pipelines, renovation statistics, materials, inspection reports with photographic logs and manhole graphics, etc.

For such purposes, IKIS provides a wide range of pre-prepared layouts to prepare the necessary data for presentation. To take advantage of them all you need to do is select the sewer objects you need from the network graphic and then choose the layout in which you want them to be displayed. The software will then create the report you need.

Customised IKIS

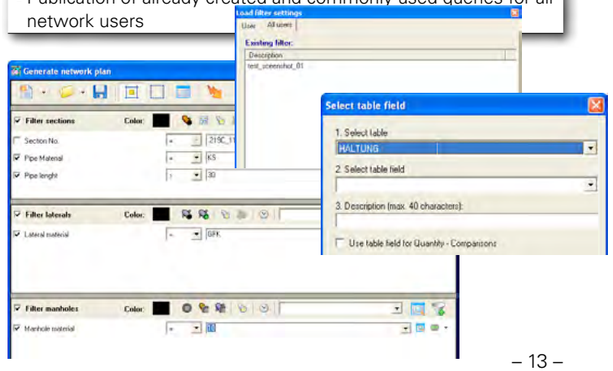


Customised data entry forms
- Easy to extend editable forms, adding user-defined table fields
- Free choice of table fields, fonts, font sizes and lookup tables
- Publication of forms already created for all network users

Editing batches of data
- Editing several sewer objects at the same time (sections, laterals, manholes)
- Free definition of the fields to be edited together with the lookup tables
- Accepts a value entered only once for all selected objects

Configurable Info dialog
- The Info dialog shows predefined fields depending on the object currently selected
- Field labels and formats in forms can be defined by the user

Individual queries
- Easy creation of user-specific queries and network plans with the individual query generator
- Freely configurable table fields and reference values
- Publication of already created and commonly used queries for all network users



Data import from and export to other systems

Exporting sections, laterals and manholes in Shape format

The IKIS network graphic can be exported into other geo-information systems (GIS). To do this, use the mouse to select the required "set of data for export" and export it as a Shape file.

Use the IKIS Settings menu to specify which master data, such as section number, street, material, etc. you want exported along with the data set.

Synchronising the IKIS database

IDB Link allows you to import data from an external database into the IKIS database, and to execute the subsequent regular synchronisation.

Any ODBC data source can be selected for import into IKIS. The fields to be imported can be configured as required. If the look-up tables between the source system and IKIS differ, then automatic value conversions can be defined for the import.

In this way, where you are using other databases in addition to the IKIS system, the database for the latter will always contain the very latest data.

Reading ASCII data into the IKIS database

Coordinates for sections, laterals, manholes and connection points often need to be imported from third party measurement systems into IKIS. You can use ISIMP to individually specify and configure the data structure for the import. Before being written to the database, data are displayed and can be edited.
During the import, data can be checked once more for consistency, so that the appropriate error messages are displayed where required.

IBAK – Made in Germany

IBAK

All IBAK products have one thing in common: They are "Made in Germany". All system components are developed, produced, assembled and tested by IBAK.
Thanks to their high quality standards, IBAK products have set the standards for investment security and economic efficiency – for more than 60 years.

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