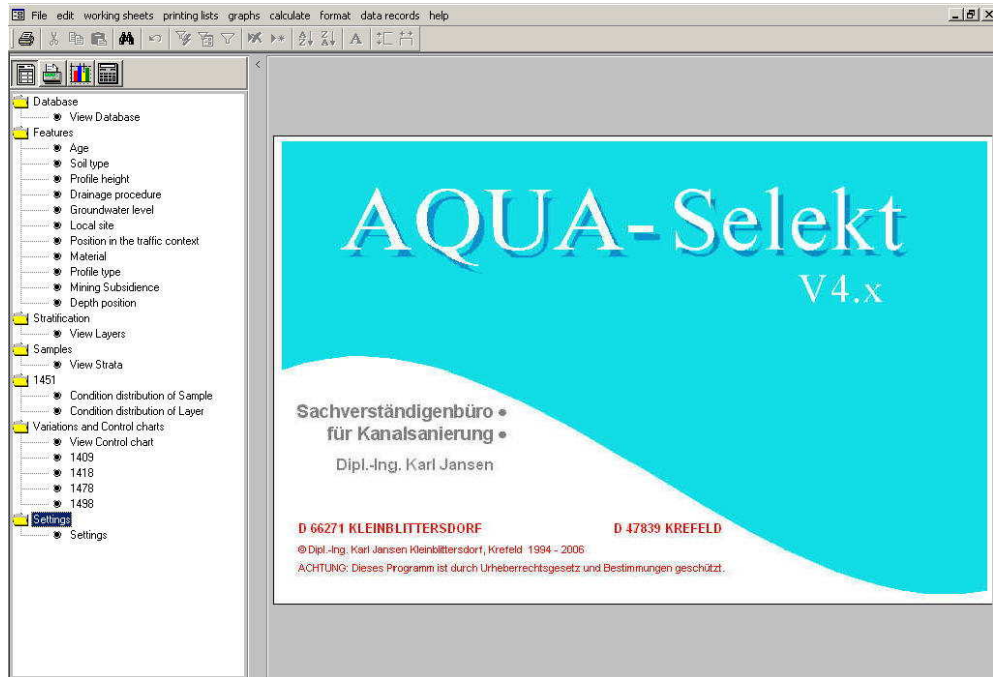


AQUA-Selekt v 4.x

EDP-Program forecast of sewer conditions with representative TV-inspektion



Purpose of Program

Sewer systems are antiquated and worn out. Extensive rehabilitation requirements far exceed the financial resources available. Before undergoing rehabilitation, the sections concerned are to be inspected. A primary or repeat inspection is generally carried out each year on approximately 10% of the sewer systems. Thus, at short notice, operators are not in a position to estimate the extent of rehabilitation or required financing on an area-wide basis. Due to the aging structure and slow but steady deterioration in condition, the information gathered in the periodical inventory is very soon out of date.

An innovative alternative to this problem is offered by the two new computer forecast models **AQUA-Selekt** and **AQUA-WertMin**. AQUA-Selekt is a world first and will be launched at NODIG 2000 in Perth.

With **AQUA-Selekt** reliable data can be developed on the rehabilitation requirements with a selective sewer inspection strategy in accordance DIN EN 752-5. The postponed primary inspection then takes place immediately before rehabilitation. This involves carrying out a visual TV inspection for representative system sections as a qualitative sample and extrapolating the condition trend of the sewers that have not been inspected by means of statistical evaluation with 95% reliability. Samples of 10-20% depending on the size of the system, are sufficient for precise information. The relative scale of sampling decreases as the size of the system increases.

Expert office for sewer rehabilitation

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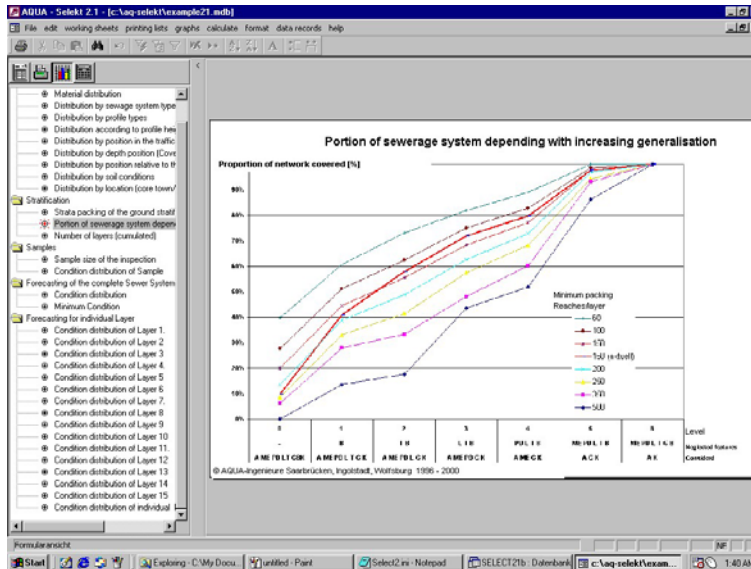
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Inspections on hand reduce the scale of sampling. This method is very profitable, in particular for large sewer systems of 1000 km and over and, in contrast to the conventional method of determining the condition of the complete system, offers considerable advantages in terms of time and cost.

System sections that are in particular need of rehabilitation are detected early on and can be given priority for complete inspection and rehabilitation. The method has been successfully tested in Germany on the sewer systems at the VW plants in Wolfsburg, Emden and Brunswick and is currently being developed further within the scope of a research project supported by the Ministry of Education and Research for the cities of Brunswick (1200km), Ingolstadt (1800km land connections and Marpingen (70km) as well as the Entsorgungsverband Saar (EVS, 700km external main reservoir of Saarland).

On the basis of a selective or complete survey of the sewer system condition, economic rehabilitation strategies with future rehabilitation and financing requirements, taking into account available financial resources, can be forecast on an area-wide basis at short notice with the aging model AQUA-WertMin.

In addition, inspection strategies that are dependent on the condition can be calculated for the postponed primary inspection of the sewers that were not inspected and for the repeat inspection.

In combination with these two EDP models more up-to-date and reliable findings on the condition can be guaranteed with a cost saving of up to 80 %.

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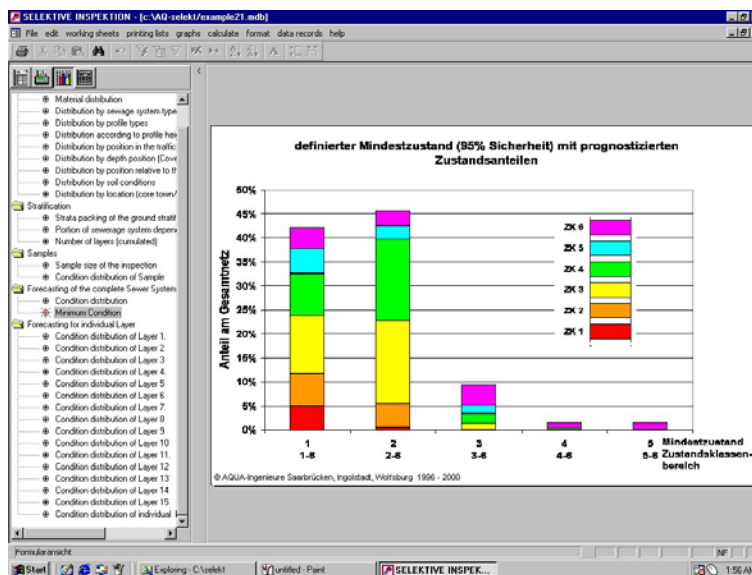
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- System-Requirements:**
- PC with minimum Pentium II 300 MHz-Recommended Pentium III 450 MHz.
 - Operating System MS-Windows 95/98, NT Workstation 4.0 or higher and MS Windows 2000.
 - MS-Access 2000.
 - Memory: minimum 64 MB, recommended 128 MB.
 - Available disk space 30 MB with MS-Access 2000 installed.
 - Recommended monitor with VGA resolution 1024 x 768.
- Operation:**
- Simple operation of the Windows 32-Bit program using Explorer-style navigation structure. Program operation is similar to MS Windows and Office programs.
- Functions:**
- Simple installation using the setup program.
 - Consistent and easy-to-use interface with Explorer-style navigation structure.
 - Online Help
 - Comprehensive, detailed program documentation included as a print file.
 - Freely-configurable import function for Access databases from Version 2.0 and databases linked using ODBC.
 - All import and calculated data can be edited in the worksheets
 - Undo incorrect input (Undo function)
 - All data can be selected using specific fields and exported to MS Access 2000 or 97 databases.



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