### **Product test**

## REHAU Awadock Polymer Connect scores "VERY GOOD"

The "Awadock Polymer Connect" sewer lateral from REHAU AG & Co. achieved a "VERY GOOD (1.0)" test verdict in IKT Product Test's "Private Sewer Laterals" category.

#### **Under test**

REHAU commissioned IKT to perform the "Private Sewer Laterals" product test, in order to determine precisely their sewer lateral's suitability for practical use.

The Awadock Polymer Connect with modified hole saw passed the test program with the "VERY GOOD" (1.0) grade, and has therefore been awarded the IKT Product Test seal of quality.

The primary evaluation criterion applied in the IKT Product Test "Private Sewer Laterals" category is the tightness of the sewer lateral both after installation and after application of structural and operational loads. The table of results and a detailed report can be downloaded from: www.ikt.de (select: Download/IKT-Warentest) A total of nine Awadock Polymer Connect sewer laterals were tested to the limit under civilengineering and operational conditions on test drain/sewer lengths at IKT. Further on-site tests covered handling characteristics under in-situ conditions. It was possible to install the sewer lateral on the site without difficulty, despite limited available time and constricted space.

A total of nine sewer laterals were installed in test lengths at IKT. All nine sewer laterals proved to be "tight" in the tightness test performed immediately after installation. The connecting lines were angled off on three of the nine sewer laterals; these sewer laterals still passed the tightness tests after angling off.

For the subsequent shear load test, a shear load was applied to the connected PP pipes for a period of 15 minutes (short-term shear load) and three months (long-term shear load). This test simulates loads imposed by soil and traffic ("live") loads. The shear load test indicated that



Installation of the Awadock Polymer Connect



Awadock Polymer Connect in the IKT test

neutral independent non-profit institute Product-Test os/2011 junction for lateral connections VERY GOOD (1,0) Download Test Report: www.ikt.de PANGE OF MARKS: VERY GOOD = 1 @ FAIL = 6

there was no deterioration in the sewer laterals' sealing function.

Results of "tight" were also achieved following high-pressure cleaning. The use of a flail caused erosion of material on the inner sleeves projecting into the main pipe, however. One of the three loaded sewer laterals then indicated "not tight" in the tightness test as a result; for this reason, it is recommended that flails not be used in practice.

#### **Connection of plastic pipes**

The Awadock Polymer Connect takes the form of a polypropylene sewer lateral, and is used to connect laterals and main drains/sewers with one another. Both conduits must be smooth-walled and must consist of PP, rigid PVC, PE or GRP. The Awadock Polymer Connect features an integrated ball joint which permits adaptation to angling off of the connecting pipe of up to 7.5° in both the horizontal and the vertical.

A different hole saw was used in a previous test for installation of the Awadock Polymer Connect. Six of the nine drill holes were significantly outside the pitch tolerances of  $162 \pm 1$  mm, resulting in leaks from one of the sewer laterals. The first test result was consequently only "GOOD (1.9)". Rehau modified the Awadock hole saw, and had the test performed again at IKT. It proved possible to drill the necessary holes during the second test quickly and with no difficulties using this modified hole saw.

### **Product test**

### The IKT Product Test "Private Sewer Laterals" category

The tests were performed in conformity to the test program developed jointly with fourteen system operators for the IKT "Private Sewer Laterals" product test. This test, performed for the first time in June 2002, combines the practical and operating experience of the system operators with IKT's scientific knowledge and discoveries. Central focuses of the test are system tests on installed sewer laterals and the evaluation of information supplied by the manufacturers (e.g. instructions for installation), and also on-site tests. This test, which continues to meet the latest standards, can be performed by sewer lateral suppliers at any time, either with sewer lateral types already tested and subsequently improved, or on newly developed products.

### **Results available in the Internet**

This article contains only extracts from the complete results. The detailed report can be downloaded from the Internet at:

www.ikt.de (select: Download/IKT -Warentest) (German Version)





IKT - Institute for Underground Infrastructure

# ABOUT IKT Set



**IKT - Institute for Underground Infrastructure** is a research, consultancy and testing institute specialized in the field of sewers. It is neutral and independent and operates on a non-profit basis. It is oriented towards practical applications and works on issues surrounding underground pipe construction. Its key focus is centred on sewage systems. IKT provides scientifically backed analysis and advice.

IKT has been established in 1994 as a spin-off from Bochum University, Germany.

The initial funding for setting up the institute has been provided by the Ministry for the Environment of the State of North-Rhine Westphalia, Germany's largest federal state.

> However, IKT is not owned by the Government. Its owners are two associations which are again non-profit organizations of their own:

a) IKT-Association of Network Operators: Members are more than 120 cities, among them Berlin, Hamburg, Cologne and London (Thames Water). They hold together 66.6% of IKT.

b) IKT-Association of Industry and Service: Members are more than 60 companies. They hold together 33.3% of IKT.

> You can find information on projects and services at: www.ikt.de



### IKT – Institute for Underground Infrastructure

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