

## TIP method used to rehabilitate pipe liners



The rehabilitation of rehabilitation work – this is an operation whose cause can be attributed among other things to the selection of incorrect material and process. The (EP-based) pipe liner installed originally gradually collapsed in several places under the constant ingress of water that was up to 90°C in temperature. After milling out the liner inspection revealed further damage such as cracks of all types, missing parts of walls, offsets etc., indicating that the TIP method was the most sensible measure to use here. Here the new pipes, which have an OD that is only slightly smaller than that of the DN 500 old pipe to be rehabilitated, are inserted

into the old pipe behind a calibrating guide sleeve tight-in-pipe, i.e. with minimal annular gap. The connecting sewers are precisely measured before inserting the pipe, then exposed again using a milling robot, and (in this case) finally reconnected using the Janßen connection method. The egeplast SL PP-B modules made of polypropylene, OD 475 x 26.9, were installed with stable tension in one day. A collector rehabilitated using the TIP method can be estimated to have almost the same service life as a newly built one. This is a fact that should always be taken into consideration before selecting and when assessing rehabilitation measures.

### Project data:

Project description	Rehabilitation of a collapsed pipe liner
Challenge	To restore the capacity of a wastewater pipeline whose function had been considerably impaired due to a collapsed pipe liner
Solution	Rehabilitation (renovation) by inserting factory produced PP pipes
Installation	Installation using the TIP method
Pipes	Old pipe: concrete DN 500 New pipe: egeplast SL PP-B Modules, OD 475 x 26.9 mm, length 1.95 m
Parties involved in the project	Client: Zentrum für Psychiatrie, Ravensburg  Planning: MBS – Mendek Bau- und Sachverständigenbüro, Ravensburg  Installation company: Otto Berenbold GmbH, Zussdorf