Release Notes
RTpipe - Buried pipes

Version 19.0

Build	Module	Description	ID
25.04.19	User interface	Arbitrary user-defined values can now be specified for the ring stiffness and failure deformation for glass-fiber reinforced plastic pipes.	13423

Version 18.0

Build	Module	Description	ID
16.05.18	Design	When generating the interface file for the design with NaZwei it could happen, that the file path was read-only (installation directory) and that this caused the termination of the design.	12609
24.04.18	Input	A user-defined elastic modulus - differing from the specification in the DWA-A 127 with E4 = 10*E1 - can be specified for the soil below the embedment.	12517
11.04.18	Analyses	The implementation of the partial safety concept for the design of the pipes will be included in the newly revised DWA-A 127, which is why it has been implemented. The approach of the safety concept as well as the values of the partial safety factors can be modified by the user.	12464
20.03.18	Input	Wrong coefficients of the young's modulus were set for the pipe type 4.0 (cast iron pipe) in the automatic calculation of the characteristic pipe values according to ATV-A 127.	12406
28.02.18	Analyses	In addition to the modifications to the guideline DWA-A 127, also the current extension for the **design of fluidized soils** has been included. Besides the extension of the load and calculation approaches for temporarily, self-compacting infilling materials (ZFSV), also new analyses have been added for these pipes. These include the analyses for the flowability and the tendency to segregate as well as analyses for the self-compaction and a possible re-excavation.	11233
28.02.18	Analyses	For the fatigue, respectively, service strength analysis the admissible stress can/must be specified in the pipe special cases now. A required safety of 2,0 in the fatigue strength analysis is additionally checked in the case of a train load. Table 22 of the DWA-A 161 (admissible stress range) is only decisive for the load case train load and is thus considered automatically.	9909
28.02.18	Calculation	The embedment condition B0 can now be selected and calculated for arbitrary trench cross-sections.	12017
28.02.18	Design	An arbitrary user-defined limiting stress for the tensile bending strength (adm.Beta.BZR) can be specified for steel pipes under "Special cases", without internal reductions of this admissible stress.	12150
28.02.18	Design	An error message is now issued, if the bending moment can not be absorbed in one of the three examined cross-sections. In these cases, no convergence is possible with the selected reinforcement layout for the incorporation of the design stress resultants.	12019
28.02.18	User interface	When opening older files with the ATV-A 127 as standard, the additionally required specifications according to DWA-A 127 now have default values in order to enable a calculation.	12096

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13.07.17	Input	The range of values of the partial safety factors for permanent and variable actions has been extended for the consideration of the increased safety level from the regulations of the DWA-A 142.	11578
13.07.17	Input	The modulus of deformation of the natural soil (E3) can now be specified by the user without automatically comparing it with the filling soil (E1) or the supporting / restraining soil (E2). For doing so, the user-defined value of E3 has to be entered with a negative sign.	11577
13.07.17	Analyses	When using the new design guideline DWA-A 127, the admissible equivalent pipe stress has been issued too low by the power of ten.	11575
20.03.17	General	Now, also the earth covered pipes have been adjusted to the requirements of the European standards for the calculation and design. The following enhancements for the guideline DWA-A127 have been made: • Introduction of the safety concept with partial safety factors for the action effects and resistances according to European standard • Update of the material coefficients according to DIN EN • Adjustment of the traffic loads to DIN EN 1991 with up-to-date load models • Extensions for railroad and plane loads • Newly composed internal force calculation • Revision of the stress and strain analyses • Additions in the fatigue analyses • Revision of the stability analyses • Additions for glass-fiber reinforced plastic pipes • Adjustments to the newest standard generation of Eurocodes and the ability to run under Windows®10 • Analyses for circular and egg-shaped pipes with/without a base • Varying wall thickness in the abutment, crown and base • Fatigue analysis according to DIN for calculated stresses in the cracked state for traffic or plane loads with 2*10^6 or for railroad loads with 10^8 load cycles as default • Calculation of the filling loads as well as traffic loads for standard vehicles, railroad traffic and design airplanes • Consideration of soil stresses from dead load as well as from the filling loads depending on the covering / pipe diameter	10861
20.03.17	User interface	The partial safety factor gamma.s_fat was limited to a maximum of 1.4, instead of 2.0.	10919