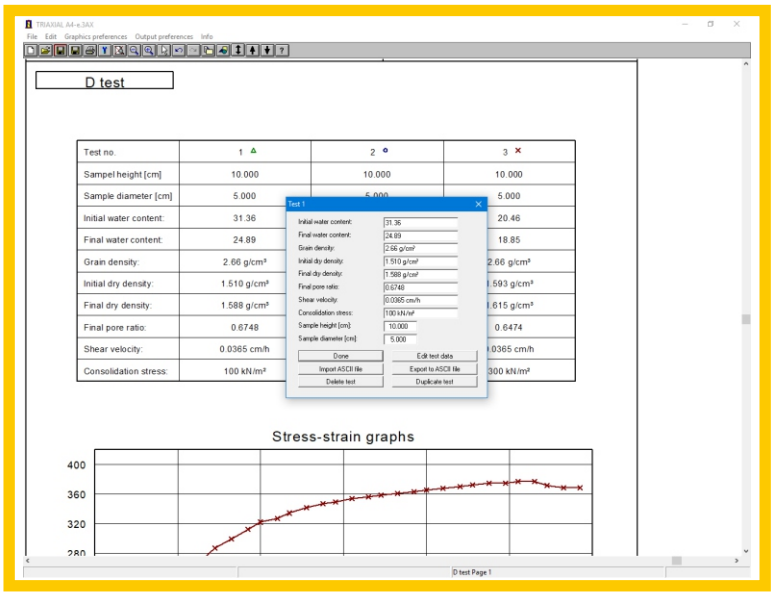
Program Details

Article number

ggu-04-010

Operating System

Windows 7/8/10



Description

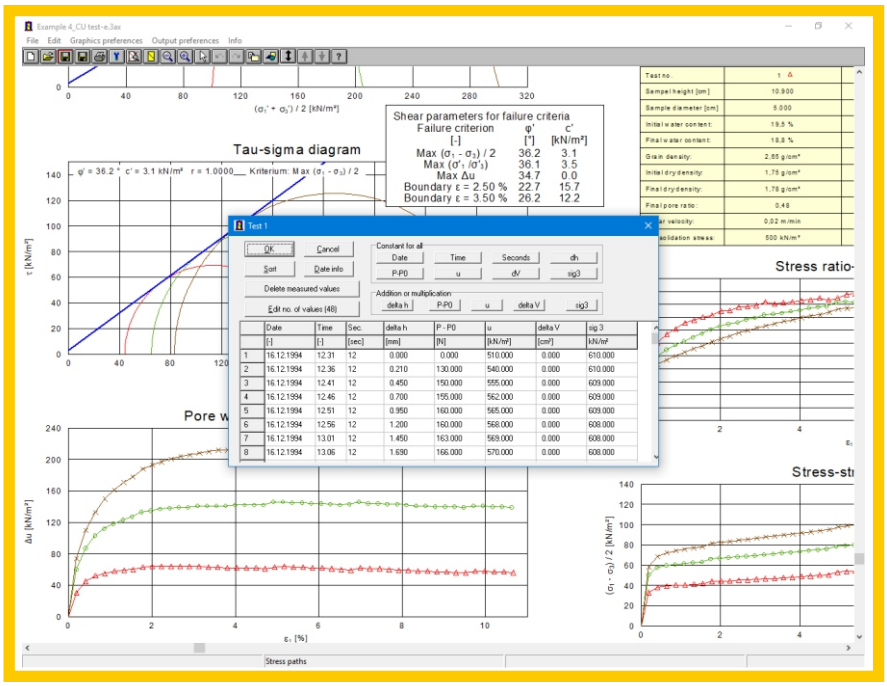
GGU-TRIAXIAL *– Evaluation and visualisation of triaxial compression tests to German Standard DIN 18137 (Part 2).*

The following tests can be comfortably evaluated:

- *D test*
- *CU test*
- *CCV test*
- *UU test*

Capabilities:

- *Input of 12 single tests maximum*
- *Import of ASCII data in file formats of different apparatus manufacturers*
- *Import and export of files in standard ASCII format*
- *Severeal test files can be merged*
- *Shear parameters determination using different failure criteria*
- *Stress paths diagram, if desired with stress circles*
- *Tau-sigma diagram*
- *Pore water pressure-strain graphs*
- *Stress ratio-strain graphs*
- *Stress-strain graphs*
- *Sigma 3-strain graphs*
- *Volume-strain graphs*
- *Shear plane visualisation automatically or with user-defined values*
- *Shear parameters for failure criteria legend*
- *Diagrams on individual A4 sheets or on an A3 sheet*
- *Log output in an annex*
- *User-designed output sheet*
- *Print or copy screen sections, e.g. for transfer to a word processor*
- *Integrated Mini-CAD system for additional annotation of graphics*



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Report: 2018
Annex: 5

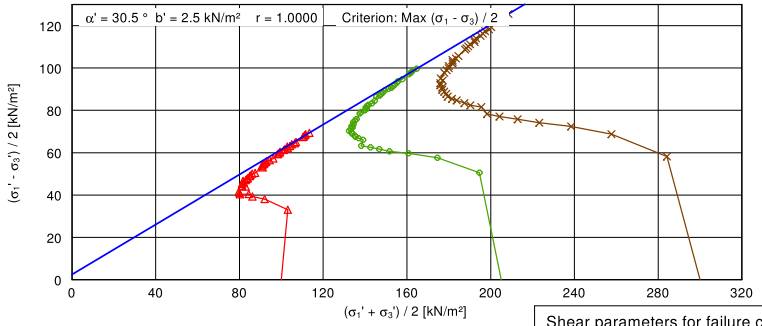
Triaxial test DIN 18137 (Part 2)

Example
CU test

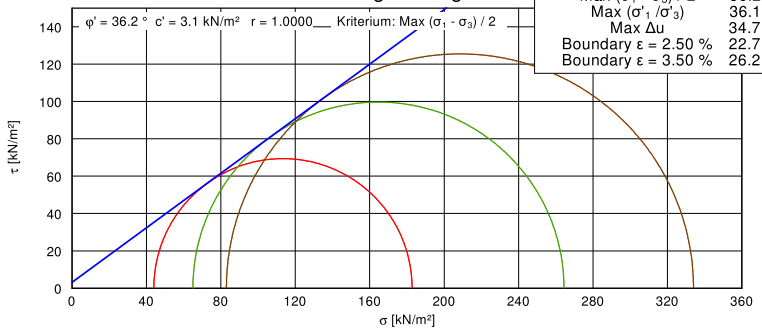
Edited by: Buß Date: 10.05.18

Test number: 2
Sampling point: B 1
Depth: 15,0 m
Soil type: Sand with Bentonit
Type of sampling: undisturbed
Sample taken on: 09.05.18

Stress paths



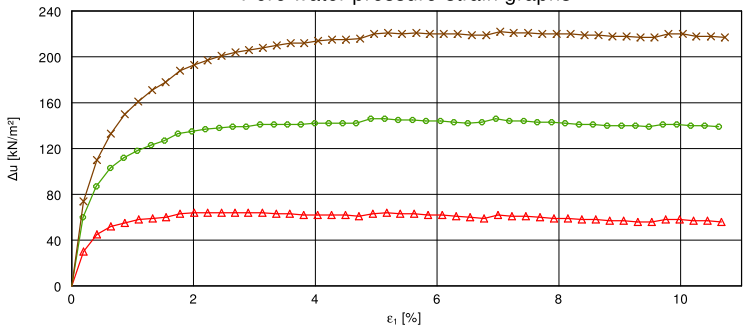
Tau-sigma diagram



Shear parameters for failure criteria

Failure criterion [-]	φ' [°]	c' [kN/m²]
Max $(\sigma_1 - \sigma_3) / 2$	36.2	3.1
Max (σ'_1 / σ'_3)	36.1	3.5
Max Δu	34.7	0.0
Boundary ε = 2.50 %	22.7	15.7
Boundary ε = 3.50 %	26.2	12.2

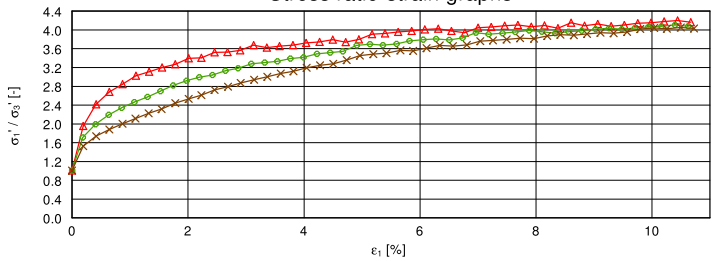
Pore water pressure-strain graphs



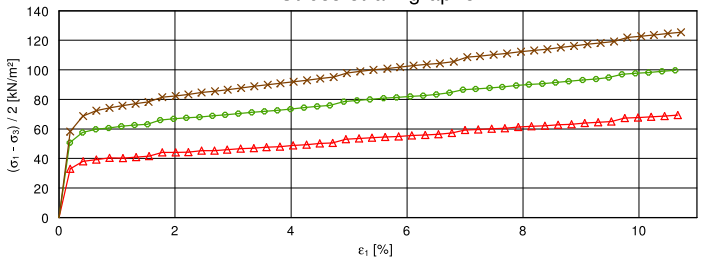
CU test

Test no.	1 △	2 ○	3 ×
Sampel height [cm]	10.900	10.900	10.900
Sample diameter [cm]	5.000	5.000	5.000
Initial water content:	19,5 %	19,5 %	19,5 %
Final water content:	18,8 %	18,8 %	18,8 %
Grain density:	2,65 g/cm³	2,65 g/cm³	2,65 g/cm³
Initial dry density:	1,75 g/cm³	1,75 g/cm³	1,75 g/cm³
Final dry density:	1,78 g/cm³	1,78 g/cm³	1,78 g/cm³
Final pore ratio:	0,48	0,48	0,48
Shear velocity:	0,02 m/min	0,02 m/min	0,02 m/min
Consolidation stress:	500 kN/m²	500 kN/m²	500 kN/m²

Stress ratio-strain graphs



Stress-strain graphs



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