

Quality Association of the Vitrified Clay Pipe Industry

Testing, supervising and certificating authority

Steinzeug Abwassersysteme GmbH
Werk STG-3
Alfred-Nobel-Strasse 32

50226 Frechen

Notified body for the certification of

- Vitrified clay pipes and fittings
- Seals and sealing materials for drainage applications
- Sanitary components
- Toilets



Köln, 29-11-2004

Test report

Nr. 19015 b

Subject	Third party certification
Ordered by	Quality Association of the Vitrified Clay Pipe Industry.
Order	Testing of jacking pipes - compressive strength
Manufacturer	Steinzeug Abwassersysteme GmbH., Werk STG-3
Order Nr.	GR2 - 76/04
Sampling date	26-10-2004
Sample entry date	28-10-2004
Samples	4 Jacking pipes EN295-7 DN 500 - FN 140 - 8,3 with stainless steel sleeve Typ 1
Evaluation	The requirements of EN 295-7, WN 295 and the quality and testing rules for vitrified clay jacking pipes are fulfilled. The routine testing has been performed completely. The results can be found in the monthly evaluation sheets.

The quality committee

This test report contains an annex of 2 pages and shall not be used abridged.

Quality Association of the Vitrified Clay Pipe Industry.

Annex page 1 of test report 19015 b

dated 15-1-2004

Ordered by: STG3

Samples: Jacking pipes DN 700 x 2000

Order Nr.: GR2 - 76/04

Sample Nr.: 349 -- 351

Sample Nr.: 349

Production date: 8-7-2004

Test specimen nr	Diameter d mm	Area A mm ²	max load F _B kN	Compr. strength Sigma d N/mm ²	Requirement WN 295-7
1	14,86	173,43	29,12	167,91	
2	14,86	173,43	30,64	176,67	
3	14,86	173,43	27,97	161,27	
4	14,85	173,20	28,84	166,51	
5	14,85	173,20	25,66	148,15	
6	14,85	173,20	28,26	163,17	
7	14,85	173,20	25,88	149,42	
8	14,85	173,20	27,61	159,41	
9	14,85	173,20	26,48	152,89	
10	14,85	173,20	29,76	171,83	
Mean value			x =	161,72	
Standard deviation			s =	9,473	
95%-Fractile			=	141,46	min. 100 N/mm ²

Sample Nr.: 350

Production date: 6-7-2004

Test specimen nr	Diameter d mm	Area A mm ²	max load F _B kN	Compr. strength Sigma d N/mm ²	Requirement WN 295-7
1	14,85	173,20	25,44	146,88	
2	14,85	173,20	30,41	175,58	
3	14,83	172,73	25,48	147,51	
4	14,85	173,20	31,05	179,27	
5	14,85	173,20	32,55	187,94	
6	14,85	173,20	32,01	184,82	
7	14,85	173,20	33,11	191,17	
8	14,86	173,43	25,34	146,11	
9	14,86	173,43	26,91	155,16	
10	14,85	173,20	26,17	151,10	
Mean value			x =	166,55	
Standard deviation			s =	18,785	
95%-Fractile			=	126,38	min. 100 N/mm ²

Testing institute

Quality Association of the Vitrified Clay Pipe Industry.

Annex page 2 of test report 19015 b

dated 15-1-2004

Ordered by: STG3

Samples: Jacking pipes DN 700 x 2000

Order Nr.: GR2 - 76/04

Sample Nr.: 349 -- 351

Sample Nr.: 351

Production date: 3-7-2004

Test specimen nr	Diameter d mm	Area A mm ²	max load F _B kN	Compr. strength Sigma d N/mm ²	Requirement WN 295-7
1	14,84	172,96	30,13	174,20	
2	14,86	173,43	26,44	152,45	
3	14,86	173,43	28,95	166,92	
4	14,86	173,43	29,42	169,63	
5	14,86	173,43	29,88	172,29	
6	14,86	173,43	32,28	186,13	
7	14,86	173,43	29,90	172,40	
8	14,85	173,20	32,49	187,59	
9	14,86	173,43	28,93	166,81	
10	14,85	173,20	30,97	178,81	
Mean value			x =	172,72	
Standard deviation			s =	10,161	
95%-Fractile			=	150,99	min. 100 N/mm ²

Statistical overall evaluation

Samples 4 -- 6
number of specimen 30

mean value	x =	167,00
standard deviation	s =	13,798
95%-fractile	=	141,35

1) Quality and test prescriptions for vitrified clay jacking pipes



Testing institute