

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, 31/03/2005

Test report

Nr. 19090 a

| | |
|-------------------|--|
| Subject | Third party certification |
| Ordered by | Quality Association of the Vitrified Clay Pipe Industry. |
| Order | Testing of jacking pipes |
| Manufacturer | Steinzeug Abwassersysteme GmbH., Werk STG-3 |
| Order Nr. | GR2 - 6/05 |
| Sampling date | 1/02/2005 |
| Sample entry date | 11/02/2005 |
| Samples | 4 Jacking pipes EN295-7 DN 600 - FN 96 - 9,6 with stainless steel sleeve Type 2 |
| 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 1 page and shall not be used abridged.

Quality Association of the Vitrified Clay Pipe Industry.

Annex page 1 of test report nr **19090** dated 31/03/2005

Samples: 4 Jacking pipes EN295-7 DN 600 - FN 96 - 9,6 with stainless steel sleeve Type 2

| | Sample Nr. | 24 | | 25 | | 26 | | Requirement | Unit | Acc. To | |
|----------------------------------|--|----------|-------|----------|-------|----------|----------------|-------------|-----------------------|------------|------------|
| Marking | EN 295-7 | + | | + | | + | | present | - | EN 295 - 7 | |
| | Third party identification | + | | + | | + | | present | - | EN 295 - 7 | |
| | Manufacturer's designation | + | | + | | + | | present | - | EN 295 - 7 | |
| | Production date | 07-04-04 | | 13-04-04 | | 08-04-04 | | present | - | EN 295 - 7 | |
| | Nominal size (DN) | + | | + | | + | | present | - | EN 295 - 7 | |
| | Crushing strength (FN) | FN 96 | | FN 96 | | FN 96 | | present | - | EN 295 - 7 | |
| | Design jacking load | 9,6 | | 9,6 | | 9,6 | | present | - | EN 295 - 7 | |
| | Finishing date | 23-11-04 | | 23-11-04 | | 23-11-04 | | present | - | WN 295 - 7 | |
| | Invert marking | + | | + | | + | | present | - | GUP | |
| Quality mark | + | | + | | + | | present | - | GUP | | |
| Appearance | + | | + | | + | | impeccable | - | GUP | | |
| Glaze colour | + | | + | | + | | RAL 8007, 8011 | - | WN 295 - 1 | | |
| | | min | max | min | max | min | max | | | | |
| Dimension spigot end | e ground length | 69,0 | 69,5 | 69,0 | 69,5 | 69,5 | 70,0 | 68,0 | 72,0 | mm | WN 295 - 7 |
| | d ₁ bore | 602,0 | 604,0 | 601,0 | 603,0 | 600,0 | 601,0 | 591,0 | 609,0 | mm | WN 295 - 7 |
| | d ₃ outside ground diameter | 722,5 | 722,5 | 722,5 | 722,5 | 722,5 | 722,5 | 722,0 | 723,0 | mm | WN 295 - 7 |
| | d _{3sp} outside diameter under tension ring | 714,0 | 714,1 | 714,2 | 714,3 | 714,5 | 714,5 | 714,0 | 715,0 | mm | WN 295 - 7 |
| | b _{spr} width tension ring | 30,0 | 30,0 | 30,0 | 30,0 | 30,0 | 30,0 | 29,5 | 30,5 | mm | WN 295 - 7 |
| | d _M outside diameter | 755,0 | 756,0 | 754,0 | 755,0 | 752,0 | 754,0 | 748,0 | 766,0 | mm | WN 295 - 7 |
| | c | 15 | 18 | 14 | 17 | 13 | 15 | min | 7,5 | mm | WN 295 - 7 |
| | Chamfer | 12,0 | 12,0 | 12,0 | 12,0 | 12,0 | 12,0 | 10 | 13 | mm | H.A. |
| | Overall wall thickness | 75,5 | 77,0 | 75,5 | 76,5 | 75,5 | 76,0 | | | mm | |
| Squareness of end | 0 | | 0 | | 0 | | max | 1 | mm | EN 295 - 7 | |
| Dimension socket end | e ground length | 69,0 | 69,5 | 69,0 | 69,0 | 69,0 | 69,0 | 68,0 | 72,0 | mm | WN 295 - 7 |
| | d ₁ bore | 603,0 | 606,0 | 602,0 | 607,0 | 601,0 | 606,0 | 591,0 | 609,0 | mm | WN 295 - 7 |
| | d ₃ outside ground diameter | 722,3 | 722,5 | 722,5 | 722,5 | 722,3 | 722,3 | 722,0 | 723,0 | mm | WN 295 - 7 |
| | d _{3sp} outside diameter under tension ring | 714,3 | 714,5 | 714,4 | 714,5 | 714,3 | 714,3 | 714,0 | 715,0 | mm | WN 295 - 7 |
| | b _{spr} width tension ring | 30,0 | 30,0 | 30,0 | 30,0 | 30,0 | 30,0 | 29,5 | 30,5 | mm | WN 295 - 7 |
| | d _M outside diameter | 757,0 | 758,0 | 757,0 | 759,0 | 755,0 | 758,0 | 748,0 | 766,0 | mm | WN 295 - 7 |
| | c | 15 | 20 | 15 | 19 | 15 | 21 | min | 8 | mm | WN 295 - 7 |
| | Overall wall thickness | 75,5 | 77,0 | 76,5 | 77,0 | 76,5 | 77,0 | | | mm | |
| | Squareness of end | 0 | | 0 | | 0 | | max | 1 | mm | EN 295 - 7 |
| l ₁ Length (average) | 1980 | | 1980 | | 1980 | | 1980 | 1982 | mm | WN 295 - 7 | |
| f deviation from straightness | 0,0 | | 0,0 | | 0,0 | | max | 5,0 | mm | EN 295 - 7 | |
| Water tightness | tight | | tight | | tight | | tight | | - | EN 295 - 7 | |
| W ₁₅ Water addition | 0,001 | | 0,001 | | 0,001 | | max | 0,04 | l/m ² /15' | GUP | |
| F _B Strength | 259,8 | | 275,3 | | 278,6 | | | | kN | | |
| F _N Crushing strength | 131,2 | | 139,0 | | 140,7 | | min | 120,0 | kN/m | WN 295 - 7 | |
| RBZ Bending tensile strength | 14,8 | | 15,7 | | 15,9 | | min | 14,0 | N/mm ² | WN 295 - 7 | |

H.A. : Manufacturer's declaration

Underlined values do not meet the requirement



Testing Institute