

Auditing Test Report

Test Report No.:SA13-4043/19

Date: 26/01/2023

Client

Saudi Vitrified Clay Pipe Co.

P.O. Box 6415

Riyadh 11442

Kingdom of Saudi Arabia

Sampling Date: 22/01/2023

Test Date: 23/01/2023

Auditing Purpose:

Testing of Vitrified Clay Pipes jointed by system F according to EN 295-1:2013

Size Description:

Nominal Size: DN 100 * 1000 mm

Jointing System: System F

Class: 34 KN/m

Description of Sampling

Samples were collected randomly from the stock at the client's manufacturing works in Riyadh (Kingdom of Saudi Arabia) by the agent of the Suhaimi - Fugro

Underlying specification /description of the tests

| | |
|-------------------|---|
| EN 295-1:2013 | "Vitrified clay pipe systems for drains and sewers - Part 1: Requirements for pipes, fittings & joints" |
| GSO EN 295-1:2008 | "Vitrified clay pipe systems for drains and sewers - Part 1: Requirements for pipes, fittings & joints" |
| WN ZP 295:2022 | 'Glazed vitrified clay pipes, fittings and their accessories for drains and sewers' |
| EN 295-2:2013 | "Vitrified clay pipe systems for drains and sewers - Part 2: Evaluation of conformity and sampling" |
| EN 295-3:2012 | "Vitrified clay pipe systems for drains and sewers - Part 3: Test Methods" |



Test Results of DN 100 mm

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| Test Type | | Unit | Sample 1 | Sample 2 | Sample 3 | Req. | Result | |
|----------------------|----------------------------------|------------------|---|----------|----------|-------------------------------------|--------|---|
| Pipes | Marking/Visual Inspection | - | ✓ | ✓ | ✓ | ✓ | ✓ | |
| | Crushing Strength | KN/m | 38 | 41 | 35 | ≥ 34 | ✓ | |
| | Internal Barrel Diameter "D1" | mm | 103 | 102 | 102 | ≥ 96 | ✓ | |
| | Length | mm | 1010 | 1010 | 1015 | 1000 ^{+4%} _{-.1%} | ✓ | |
| | Water Tightness | L/m ² | 0.025 | 0.02 | 0.03 | ≤ 0.04 | ✓ | |
| | Deviation from Straightness | mm | 4.2 | 3.4 | 3.2 | < 5.0 | ✓ | |
| | Squareness of Ends | Socket | mm | 2.2 | 1.8 | 2.1 | < 6.0 | ✓ |
| | | Spigot | mm | 2.3 | 2.3 | 1.7 | | |
| | Airtightness | mm | 5 | 5 | 10 | Drops ≤ 25 | ✓ | |
| | Chemical Resistance | % | 0.15 | 0.12 | 0.17 | 0.10-0.25% | ✓ | |
| Water Absorption | % | 1.7 | 1.7 | 2.1 | ≤ 6 % | ✓ | | |
| Joint Assembly | Joint Interchangeability (D3) | mm | 130.8 | 131.2 | 131.1 | 131 ± 1.5 | ✓ | |
| | Watertightness under Deflection | 0.5 bar | No leak, for 5 minutes under Deflection of 100 mm/m | | | No visible leakage | ✓ | |
| | Watertightness under shear | | No leak, for 15 minutes under shear load of 2.5 KN | | | | ✓ | |
| | Watertightness of joint assembly | 1.0 bar | No leak, for 15 minutes without shear or deflection | | | | ✓ | |
| | | 2.4 bar | | | | ✓ | | |
| Continuity of Invert | mm | N/A | | | N/A | ✓ | | |

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