

Auditing Test Report

Date: 12/7/2017

Testing Date:

Lab No.: 40155-3

P.O. Box 6415

Client Sampling Date:

Saudi Vitrified Clay Pipe Co. 10/7/2017

Riyadh 11442 11/7/2017

Kingdom of Saudi Arabia

Auditing Purpose:

Testing of Perforated Vitrified Clay Pipes jointed by system F according to EN 295-5:2013

Size Description:

Nominal Size: DN 100 * 1000 mm Half Perforated

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"

"Vitrified clay pipe systems for drains and sewers - Part 5: Requirements for perforated pipes &

fittings"

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

| Pipes | Test Type | Unit | Sample 1 | Sample 2 | Sample 3 | Req. | Result |
|----------------|-------------------------------|--------|--|----------|----------|---------------|--------|
| | Marking (visual Inspection) | - | ~ | ✓ | ✓ | √ | / |
| | Crushing Strength | KN/m | 35 | 37 | 39 | ≥ 34 | / |
| | Internal Barrel Diameter "D1" | mm | 101 | 102.5 | 99.8 | ≥ 96 | ~ |
| | Length | mm | 1005 | 1009 | 1005 | 1000 +5% -2% | ~ |
| | Deviation from Straightness | mm | 4.1 | 3.6 | 3.2 | < 6.0 | ~ |
| | Perforation Area | mm²/m | 6280 | | | ≥ 300 | / |
| | Water Absorption | % | 1.8 | 2.4 | 2.1 | ≤6% | ~ |
| Joint Assembly | Joint Interchangeability | mm | 132.4 | 131.2 | 131.8 | 131 ± 1.5 | / |
| | Continuity of Invert | mm | 2.4 | 2.2 | 2.2 | ≤ 4 | ~ |
| | Chemical Resistant | % loss | 0.15% & 0.16% , Two test pieces were immersed totally in 500 ml of $\rm H_2SO_4$ & NaOH solutions for 48 h at a temperature of (20 \pm 5) °C | | | 0.1% to 0.25% | / |

FUGRO - SUHAIMI LTD

Anil K Mathew

