

## Auditing Test Report

Test Report No.:SA13-4043/22

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 150 \* 1500 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 150 mm

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Test Type		Unit	Sample 1	Sample 2	Sample 3	Req.	Result	
Pipes	Marking (visual Inspection)	-	✓	✓	✓	✓	✓	
	Crushing Strength	KN/m	43	47	49	≥ 34	✓	
	Internal Barrel Diameter "D1"	mm	153	150	151	≥ 146	✓	
	Length	mm	1510	1502	1505	1500 <sup>+4%</sup> <sub>-1%</sub>	✓	
	Water Tightness	L/m <sup>2</sup>	0.03	0.01	0.02	≤ 0.04	✓	
	Deviation from Straightness	mm	2.4	3.2	2.5	< 4.5	✓	
	Squareness of Ends	Socket	mm	1.7	1.7	2.0	< 6.0	✓
		Spigot	mm	1.8	1.8	1.9		
	Airtightness	mm	5	0	10	Drops ≤ 25	✓	
	Chemical Resistance	%	0.20	0.19	0.17	0.10-0.25%	✓	
	Water Absorption	%	2.2	2.5	2.1	≤ 6 %	✓	
Bending Moment Resistance	KNm	10.7	11.4	10.8	≥ 5.0	✓		
Joint Assembly	Joint Interchangeability (D3)	mm	186.4	186.5	186.5	186 ± 2.0	✓	
	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 3.75 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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