

## Auditing Test Report

Test Report No.: SA13-4043/33

Date: 10/01/2024

### Client

Saudi Vitrified Clay Pipe Co.

P.O. Box 6415

Riyadh 11442

Kingdom of Saudi Arabia

Sampling Date: 06/01/2024

Test Date: 07/01/2024

### Auditing Purpose:

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

### Size Description:

Nominal Size: DN 450 \* 2000 mm

Joining System: System C

Class: 160 - Class A

### 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"
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 450 ES - Class A

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Test Type		Unit	Sample 1	Sample 2	Sample 3	Req.	Result	
Pipes	Marking (visual Inspection)	-	✓	✓	✓	✓	✓	
	Crushing Strength	KN/m	115	110	114	≥ 80	✓	
	Internal Barrel Diameter "D1"	mm	450	450	452	≥ 439	✓	
	Length	mm	2010	2010	2005	2000 <sup>+4%</sup> <sub>-1%</sub>	✓	
	Water Tightness	L/m <sup>2</sup>	0.01	0.03	0.02	≤ 0.04	✓	
	Deviation from Straightness	mm	0.5	0.7	0.9	< 3.0	✓	
	Squareness of Ends	Socket	mm	3.8	3.7	3.4	< 9.0	✓
		Spigot	mm	3.7	4.1	3.8		
	Airtightness	mm	15	18	15	Drops ≤ 25	✓	
	Chemical Resistance	%	0.15	0.15	0.18	0.10-0.25%	✓	
	Water Absorption	%	4.6	4.7	4.5	≤ 6 %	✓	
Joint Assembly	Joint Interchangeability (D4)	mm	579.2	579.3	579.2	579 ± 0.5	✓	
	Watertightness under Angular Deflection	0.5 bar	No leak, Deflection applied is 30 mm/m for 5 min.			No visible leakage	✓	
	Watertightness under Shear	0.5 bar	No leak, Shear force applied is 11.25 KN for 15 min.			No visible leakage	✓	
	Continuity of Invert	mm	2.4	2.6	2.5	≤ 4.5	✓	

FUGRO - SUHAIMI LTD

Mohammad Afaq

