السحيمي - فيغرو
FUGRO - Suhaimi

Auditing Test Report

Date: 10-Jan-24

Report No.: SA13-4043/41

Client
Saudi Vitrified Clay Pipe Co.
P.O. Box 6415
Riyadh 11442
Kingdom of Saudi Arabia

Sampling Date:
07 January 2024
Testing Date:
09 January 2024

Auditing Purpose:

Testing of Chemical and physical resistance to effluent of joint assemblies according to EN 295-1:2013/WN ZP 295:2022

Testing of Thermal cycling stability of joint assemblies according to EN 295-1:2013, Clause 6.6

Testing of Long-term thermal stability of joint assemblies according to EN 295-1:2013, Clause 6.7

Description of Sampling

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

Underlying specification of the tests

EN 295-1:2013 "Vitrified clay pipe systems for drains and sewers - Part 1: Requirements for pipes, fittings & joints"

WN 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

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Test Results of Chemical & Thermal Testing of joint assemblies

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Test	Requirements	Pipe Size	Chemical Solution	PH	Concent. (mol/L)	Water tightness Result
Chemical Resistance to effluent for joint assemblies	Four joint assmblies shall be immersed in different four chemical solutions for 168 hrs, then water tightness shall be carried out and there shall be no visible leakage within 5 min.	300 ES (Hard Poyurethane)	H_2SO_4	2.0	0.005	No visible leakage
			HNO_3	2.0	0.01	No visible leakage
			NaOH	12.0	0.01	No visible leakage
			NaOCl	12.0	0.01	No visible leakage
		150 mm (L-ring)	H_2SO_4	0.0	0.5	No visible leakage
			HNO_3	0.0	1.0	No visible leakage
			NaOH	14.0	1.0	No visible leakage
			NaOCl	14.0	1.0	No visible leakage
		200 SS (Foam)	H_2SO_4	2.0	0.005	No visible leakage
			HNO_3	2.0	0.01	No visible leakage
			NaOH	12.0	0.01	No visible leakage
			NaOCl	12.0	0.01	No visible leakage
Thermal Cycling	Joint Assmebly shall withstand cyclic temperature changes between (-10) °C and (+70) °C without visible defect. Then, water tightness shall be carried out for the same joint assembly for 15 minutes and there shall be no visible leakage	150 mm	-	-	-	No visible leakage
		250 SS				No visible leakage
Long Term Thermal Cycling	Water shall be fed through a joint assembly to maintain a temperature of (45) °C for seven days. A water tightness shall be then carried out for the same assmebly for 15 minutes and there shall be no visible leakage.	150 SS	-	-	-	No visible leakage
		250 SS				No visible leakage

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