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TECHNICAL REPORT

Sayfa Group (Europe) Ltd Unit B1 Research Point Shepshed Leicestershire LE19 1WH United Kingdom	SATRA reference:	SPC2004907	
		2418	2
	Report ID/Issue number:	40146/1	
	Your reference:		
	Date samples received:	26/04/2024	
	Date(s) work carried out:	16/05/2024 to 16/05/2024	
	Date of report:	29/05/2024	

Testing Requirements

Testing of a horizontal anchor line described as "FSL.0270.0450.3U" in accordance with BS 8610:2017 type C1L - restraint - load-limiting for up to 3 users

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Report Signed by:

Edward Brooks


Report Signatory



Technical Report

WORK REQUESTED

Samples of a horizontal anchor line described as "FSL.0270.0450.3U" were received by SATRA on the 16th May 2024, for limited testing in accordance with BS 8610:2017 type C1L Restraint – load-limiting

CONCLUSIONS

SAMPLE REFERENCE	STANDARD	CLAUSE / PROPERTY	PASS / FAIL
FSL.0270.0450.3U	BS 8610:2017	4.6.2.2 Type C1L Restraint – load-limiting	PASS

TESTING

Testing was carried out in accordance with BS 8610:2017 on the 16th May 2024

The anchor device allows up to a maximum of 3 users to be attached

For the purposes of testing, the anchor device was installed onto concrete using M10 concrete screws, with test forces applied in a horizontal direction

Samples were tested as received, and were not subject to any pre-conditioning processes other than those stated in individual test clauses



Figure 1 – End anchor from horizontal anchor described as “FSL.0270.0450.3U”



Figure 2 – Intermediate anchor from horizontal anchor described as “FSL.0270.0450.3U”



Figure 3 – Corner from horizontal anchor described as “FSL.0270.0450.3U”

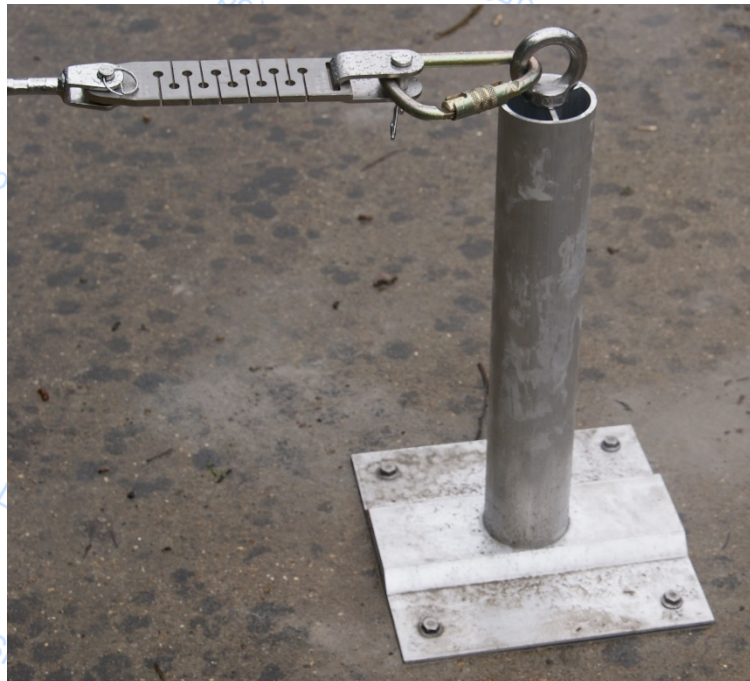


Figure 4 – End anchor from horizontal anchor described as “FSL.0270.0450.3U”

TEST RESULTS

Table 1 – Testing of “FSL.0270.0450.3U” in accordance with BS 8610:2017, Types C1L Restraint – load-limiting

BS 8610:2017 CLAUSE / TEST	BS 8610:2017 REQUIREMENT	RESULT / COMMENT	PASS / FAIL
4.6.2.2 Type C1L Restraint – load- limiting	4.6.2.2.1 The maximum number of users permitted shall be no more than three	Minimum number of users: 3	PASS
	4.6.2.2.2 Anchor devices used as part of a type C1L anchor system shall conform to the static strength requirements of EN 795:2012	Not assessed	Not assessed
	4.6.2.2.3 Following the static deformation load of: For 1 user: (1 x RL_{max}) kN with a minimum of 1kN For 2 user: (1.5 x RL_{max}) kN with a minimum of 1.5kN For 3 users: (2 x RL_{max}) kN with a minimum of 2kN applied to the extremity anchor, the intermediate point and the corner point, the anchor point shall hold the load and no part of the anchor system shall demonstrate permanent deformation of more than 10mm	Position: Extremity anchor 2kN sustained for 3 minutes without failure Deformation: 2mm	PASS
		Position: Intermediate Not applicable – See extremity anchor results	
	Position: Corner Not applicable – See extremity anchor results		



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BS 8610:2017 CLAUSE / TEST	BS 8610:2017 REQUIREMENT	RESULT / COMMENT	PASS / FAIL
4.5.2.2 Type C1 Restraint – non- load-limiting	4.6.2.2.4 When tested in accordance with the relevant anchor system static strength test, with the load applied to the flexible anchor line via the anchor point on each traveller with the traveller(s) positioned at: a) the flexible anchor line at the centre of the longest span permitted by the manufacturer; b) entry/exit line fittings, where fitted; the anchor system shall hold the load.	Position: Centre of longest span Required force: 9kN 9kN sustained for 3 minutes without failure Peak force at extremity anchor: 9.88kN Line deflection under load: 3.17m See note 3	PASS
		Position: On end anchor Required force: 9.88kN 10kN sustained for 3 minutes without failure See note 3	
		Position: On corner Required force: 9.88kN 10kN sustained for 3 minutes without failure See note 3	
	4.6.2.2.5 When tested in accordance with the relevant anchor system static strength test, with the load applied via the anchor point on each traveller at an intermediate anchor, where fitted, the anchor shall hold the load	Position: On intermediate Required force: 3kN 3kN sustained for 3 minutes without failure	PASS

ADDITIONAL INFORMATION / NOTES

Note 1 – ‘UoM’ denotes estimated Uncertainty of Measurement for stated test results. This uncertainty value is based on a standard uncertainty multiplied by a coverage factor $k = 2$, which provides for a confidence level of approximately 95%

Note 2 – Estimated uncertainty of measurement applied at point of test (e.g. to applied force or to tolerance limits) to ensure product meets requirements of the standard

Note 3 – Static strength testing carried out by manually increasing loading, therefore rate of stressing / crosshead velocity as per EN 364: 1992 Clauses 4.1.2.1 & 4.1.2.2 cannot be accurately determined (see VG11 recommendation for use sheet CNB/P/11.023 dated 25.10.2007)

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When reporting results against a conformance statement (Pass/Fail or the allocation of a class or level) then uncertainty of measurement is taken into account based on a non-binary acceptance which itself is based on the guard band being equal to the expanded uncertainty.

Where the result corrected for uncertainty falls within the tolerance of the conformance statement then the risk of the conformance statement being a false accept or false reject is up to 2.5% and SATRA will in this instance quote a Pass/Fail, class, or level.

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