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TECHNICAL REPORT

Sayfa Group (Europe) Ltd Unit B1 Research Point Shepshed Leicestershire LE19 1WH UK	SATRA reference:	SPC4684F4T4	
		2341	5
	Report ID/Issue number:	34833/1	
	Your reference:		
	Date samples received:		
	Date(s) work carried out:	27/10/2023 to 27/10/2023	
	Date of report:	30/11/2023	

Testing Requirements

Testing of a rigid anchor rail described as "FST.079.081.6000.3U FallSecure Track" in accordance with BS 8610:2017 type D1 for up to 3 users

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Report Signed by:

Edward Brooks


Report Signatory

WORK REQUESTED

Samples of "FST.079.081.6000.3U FallSecure Track" were received by SATRA on the 27th October 2023, for testing in accordance with BS 8610:2017 type D1 for up to 3 users

CONCLUSIONS

SAMPLE REFERENCE	STANDARD	CLAUSE / PROPERTY	PASS / FAIL
FST.079.081.6000.3U FallSecure Track	BS 8610:2017	4.1 General requirements	PASS See note 4
		4.2 Pre-testing verification and recording requirements	PASS See note 4
		4.3 Materials	PASS See note 4
		4.4 Design and ergonomics	PASS See note 4
		4.5.3.2 Type D1 restraint – non-load-limiting	PASS

TESTING

Testing was carried out in accordance with BS 8610:2017 on the 27th October 2023

The anchor device is intended as a type D (rigid anchor rail) device

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

For the purposes of testing, the anchor device was installed onto concrete, with test forces applied in a direction parallel to the ground

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



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Figure 1 – Anchor described as “FST.079.081.6000.3U FallSecure Track”



Figure 2 – Anchor described as “FST.079.081.6000.3U FallSecure Track”

TEST RESULTS

Table 1 – Testing of “FST.079.081.6000.3U FallSecure Track” in accordance with BS 8610:2017, Type D1 restraint – non-load-limiting

BS 8610:2017 CLAUSE / TEST	BS 8610:2017 REQUIREMENT	RESULT / COMMENT	UoM (See note 1)	PASS / FAIL
4.1 General requirements	Anchor systems shall be tested in the base materials that the manufacturer permits, unless otherwise specified in the relevant test methods	The anchor device was tested in concrete		PASS
	Where the manufacturer permits loading in more than one direction, anchor systems shall be tested in each relevant principal safety critical direction	Testing was carried out in 1 direction on each relevant safety critical position		PASS
	Where alternative configurations of the same type of anchor device are to be made available, the worst configuration shall be tested, ensuring the limit is set for the configuration that could be offered	Not applicable – no alternative configurations		N/A
	If the geometry, configuration, or material of an anchor device, including the structural anchor, differs from the one that has been tested as part of the anchor system, the anchor system shall be verified by testing to clause 5, or proven by calculation with the results recorded	Not applicable – no alternative configuration, geometry or materials used		N/A

BS 8610:2017 CLAUSE / TEST	BS 8610:2017 REQUIREMENT	RESULT / COMMENT	UoM (See note 1)	PASS / FAIL
4.2 Pre-testing verification and recording requirements	It shall not be possible for elements of the anchor system to become unintentionally detached	Unintentional detachment is unlikely during normal use		PASS
	If an element can be removed it shall be designed to have at least 2 separate, consecutive, and deliberate manual actions	Greater than 2 deliberate actions are required in order to remove the traveller from the rail		PASS
	For anchor systems which include removable elements, those shall be such that they cannot appear to be positively locked together when they are not, due to incorrect assembly	Incorrect assembly would be visually evident	N/A	PASS
	Anchor points shall be designed to ensure easy engagement and free rotation of connectors and that connectors align in the preferred load-bearing position	Connectors can rotate freely and sit in their preferred load bearing position		PASS
	If a fall or overload indicator is incorporated, the indicator shall clearly show that a fall has occurred upon completion of the dynamic and static tests	Not applicable – no fall indicators included		N/A



BS 8610:2017 CLAUSE / TEST	BS 8610:2017 REQUIREMENT	RESULT / COMMENT	UoM (See note 1)	PASS / FAIL
4.2 Pre-testing verification and recording requirements	<p>The mass of any element of an anchor system that is intended to be transported shall be less than 25kg</p> <p>The maximum rated load (RL_{max}) shall be a minimum of 100kg and shall be rounded to nearest 0.1kN</p>	<p>Maximum weight of transportable parts of anchor: 24.5kg</p> <p>Maximum rated load per user: 100kg</p>	N/A	<p>PASS</p> <p>PASS</p>
4.3 Materials	<p>Metallic parts shall show no evidence of any corrosion that could affect the function of the device (white scaling or tarnishing is acceptable)</p> <p>Wire ropes shall be made from stainless steel, or galvanized steel conforming to BS EN 12385-4</p> <p>Steel wire ropes shall be galvanized in accordance with ISO 2232. Other steel elements shall be galvanized in accordance with BS EN ISO 1461</p>	<p>Corrosion test in accordance with ISO 9227: 2017 - 96 hours Neutral Salt Spray, with a break for 1 hour at 24-hour intervals</p> <p>Temperature: 35 °C Fall out rate: 1.93ml/hr pH of test solution: 6.5 Specific gravity of test solution: 1.032</p> <p>Rust and white scaling present on nuts of fixture elements. No effect to device function</p> <p>Not applicable – no wire ropes</p> <p>Not applicable – no wire ropes</p>	<p>See table 2 See note 2</p>	<p>PASS</p> <p>N/A</p> <p>N/A</p>



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BS 8610:2017 CLAUSE / TEST	BS 8610:2017 REQUIREMENT	RESULT / COMMENT	UoM (See note 1)	PASS / FAIL
4.3 Materials	Load-bearing textile elements shall only be used if the manufacturer can demonstrate that they incorporate sufficient protection against Ultraviolet degradation for their foreseeable life	Not applicable – no textile elements	See table 2 See note 2	N/A
	Textile elements shall be made from virgin mono-filament or multi-filament synthetic fibres	Not applicable – no textile elements		N/A
	The breaking tenacity of synthetic fibres shall be a minimum of 0.6 N/tex	Not applicable – no textile elements		N/A
	Threads shall be of a contrasting shade or colour to the webbing or rope	Not applicable – no textile elements		N/A
	Connectors shall conform to EN 362	Connectors are marked as compliant with EN 362		PASS
	Wire rope terminations shall not include U-bolt wire rope grips in any part of the anchor system	Not applicable – no wire ropes		N/A
	Materials used for the wire rope termination shall be compatible with the materials used for the wire rope	Not applicable – no wire ropes		N/A



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BS 8610:2017 CLAUSE / TEST	BS 8610:2017 REQUIREMENT	RESULT / COMMENT	UoM (See note 1)	PASS / FAIL
4.4 Design and ergonomics	The load-bearing edges of anchor points that are holes shall have a minimum radius of 1mm	Load bearing edges have a minimum radius of 1mm	N/A	PASS
	Anchor systems shall not have sharp edges or burrs that may cause injury to the user. Exposed edges or corners shall be relieved either with a minimum radius of 0.5mm or a chamfer of no less than 0.5mm x 45°	Exposed edges are rounded to prevent injury		PASS

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BS 8610:2017 CLAUSE / TEST	BS 8610:2017 REQUIREMENT	RESULT / COMMENT	UoM (See note 1)	PASS / FAIL
4.5.3.2 Type D1 Restraint – non- load-limiting	4.5.3.2.1 The maximum number of users permitted shall be no more than three	Maximum number of users: 3	N/A	PASS
	4.5.3.2.2 Anchor devices used as part of a D1 anchor system shall conform to the static strength requirements of BS EN 795:2012 clause 5.6.4	Position: Centre of longest span 12kN sustained for 3 minutes without failure See note 3	N/A	PASS
		Position: Extremity anchor 12kN sustained for 3 minutes without failure See note 3		
	4.5.3.2.3 When tested for static strength and deformation with the load applied via the anchor point on each traveller to: a) the rigid anchor line at the centre of the longest span permitted by the manufacturer; b) extremity anchors; c) intermediate anchors, where fitted; d) corner anchors, where fitted; and e) entry/exit line fittings and joints, cantilevers, and end stops, where fitted, the anchor system shall hold the load and no part of the anchor system shall demonstrate permanent deformation of more than 10mm	Position: Centre of longest span Required force: 9kN 9kN sustained for 3 minutes without failure Deformation: 11mm See note 3	± 50 N See note 2	PASS
		Position: Extremity anchor Required force: 9kN 9kN sustained for 3 minutes without failure Deformation: 4mm See note 3		

ADDITIONAL INFORMATION / NOTES

Table 2 – Additional uncertainty of measurement information (see note 1)

CLAUSE	TEST / COMPONENT	UoM (see note 1)
Corrosion resistance	Temperature	± 0.99 °C
	Fall-out rate of collected solution	± 2.25 ml (± 0.04 ml/hour for 24 hours)
	Specific gravity of collected solution	± 0.0010 g/ml
	pH value of collected solution	± 0.1
	Angle of sample mounting (if applicable)	± 1.44°

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)

Note 4 – Results for clauses 4.1, 4.2, 4.3 & 4.4 are taken from report reference SPC0352363 /2327 Issue 2.

***** END OF REPORT *****

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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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