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For the attention of: Mr M Cox

Technical Report

Subject: LIMITED TESTING OF "B SAFE FASTGUARD COLLECTIVE FALL PREVENTION SYSTEM" IN ACCORDANCE WITH EN 13374: 2004

Your ref:

Our ref: SPC0187085/1031/1

Date: 2 September 2010

Conditions of Issue:

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Report signed by: Nathan Wright
Position: PPE Technologist
Department: Safety Product Centre



WORK REQUESTED

A sample of temporary edge protection system, reference “B Safe Fastguard Collective Fall Prevention System”, was installed for testing on 27 August 2010, for testing in accordance with EN 13374: 2004 Temporary edge protection systems – Product specification & test methods.

CONCLUSIONS

SAMPLE REFERENCE	STANDARD	CLAUSE / PROPERTY	PASS / FAIL
B Safe Fastguard CFPS	EN 13374: 2004	5.2.1 Additional requirements – Edge protection system class A	See note 1
		6.3.1.1 Static loads – Horizontal load F_H – General	PASS
		6.3.6 Accidental loading	PASS

Note 1 – Requirements for intermediate guardrail not assessed

TESTING

Testing was carried out in accordance with EN 13374: 2004 on 27 August 2010

For the purposes of testing, the system was installed on a section of scaffold (with platform) at the premises of B Safe Limited, Bicester. Testing was witnessed by Nathan Wright, of SATRA Technology Centre, with all measurements taken or verified using SATRA calibrated equipment

The system is comprised of at least two coupling devices, which connect a standard scaffold pole to the scaffold uprights to form a horizontal guard rail. Two testing configurations were used:

1. A 21’ (6.4 m) pole, attached to the uprights at two points over a span of 3.6 m, connected via a join to a shorter pole, attached to uprights at two points over a span of 2.0 m (span between the two poles 2.0 m)
2. A single 21’ (6.4 m) pole, attached to the uprights at two points over a span of 5.63 m

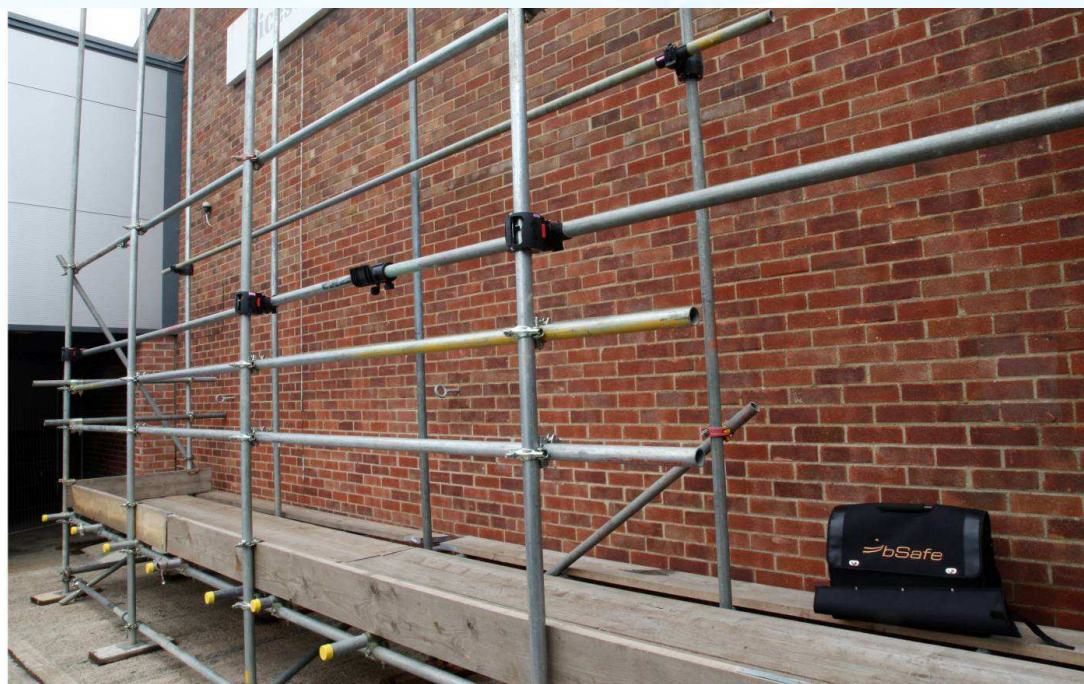


Figure 1 – Temporary edge protection system reference “B Safe Fastguard CFPS” installed for testing (showing coupler and join)

TEST RESULTS

Table 1 – Testing of edge protection system reference “B Safe Fastguard CFPS” (configuration 1) in accordance with EN 13374: 2004 for a class A device

EN 13374: 2004 CLAUSE / TEST	EN 13374: 2004 REQUIREMENT	RESULT / COMMENT	UoM (See note 2)	PASS / FAIL
5.2.1 Additional requirements – Edge protection system class A	The inclination of edge protection system class A shall not deviate from the vertical by more than 15 ° If an intermediate guardrail is provided, any gap shall be so dimensioned that a sphere of 470 mm diameter will not pass through the protection	Edge protection intended only for attachment to vertical uprights Not assessed	N/A	See note 1

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EN 13374: 2004 CLAUSE / TEST	EN 13374: 2004 REQUIREMENT	RESULT / COMMENT	UoM (See note 2)	PASS / FAIL
6.3.1.1 Static loads – Horizontal load F_H – General	Each edge protection and each of its components, except toeboards, shall be designed to withstand a load $F_{HI} = 0.3$ kN applied perpendicular to the axis of the post	Position: Upright, outward 0.3 kN sustained for 1 minute without failure Position: Mid-span, outward 0.3 kN sustained for 1 minute without failure Position: Join, outward 0.3 kN sustained for 1 minute without failure Position: Join (other side), outward 0.3 kN sustained for 1 minute without failure Position: Upright, inward 0.3 kN sustained for 1 minute without failure Position: Mid-span, inward 0.3 kN sustained for 1 minute without failure Position: Join, inward 0.3 kN sustained for 1 minute without failure Position: Join (other side), inward 0.3 kN sustained for 1 minute without failure	± 50 N	PASS

EN 13374: 2004 CLAUSE / TEST	EN 13374: 2004 REQUIREMENT	RESULT / COMMENT	UoM (See note 2)	PASS / FAIL
6.3.6 Accidental loading	Any guardrail or intermediate guardrail or toeboard, regardless of its method of support, shall be capable of resisting a downwards point load $F_D = 1.25$ kN on a length of 100 mm	Position: Upright 1.33 kN sustained for 1 minute without failure Position: Mid-span 1.33 kN sustained for 1 minute without failure Position: Join 1.33 kN sustained for 1 minute without failure Position: Join (other side) 1.33 kN sustained for 1 minute without failure	± 50 N	PASS

Table 2 – Testing of edge protection system reference “B Safe Fastguard CFPS” (configuration 2) in accordance with EN 13374: 2004 for a class A device

EN 13374: 2004 CLAUSE / TEST	EN 13374: 2004 REQUIREMENT	RESULT / COMMENT	UoM (See note 2)	PASS / FAIL
5.2.1 Additional requirements – Edge protection system class A	<p>The inclination of edge protection system class A shall not deviate from the vertical by more than 15 °</p> <p>If an intermediate guardrail is provided, any gap shall be so dimensioned that a sphere of 470 mm diameter will not pass through the protection</p> <p>If there is no intermediate guardrail or if it is not continuous, the edge protection system shall be so dimensioned that a sphere with a diameter of 250 mm will not pass through it</p>	<p>Edge protection intended only for attachment to vertical uprights</p> <p>Not assessed</p> <p>Not assessed</p>	N/A	See note 1

EN 13374: 2004 CLAUSE / TEST	EN 13374: 2004 REQUIREMENT	RESULT / COMMENT	UoM (See note 2)	PASS / FAIL
5.2.1 Additional requirements – Edge protection system class A (continued)	<p>If it is not possible to verify the load requirements by calculation, the static load tests shall be carried out. In this case, to comply with this standard:</p> <p>d) On the completion of the deflection tests, the adjusted elastic deflection, δ, shall not be greater than 55 mm</p> <p>e) On completion of the strength tests, the adjusted strength, R_u, shall be not less than 1.2 times the maximum test load</p> <p>f) The residual deflection, δ_3, shall not exceed 10 % of the deflection at maximum load, δ_{max}</p>	<p>Position Elastic deflection / mm</p> <p>Mid-span, inward 40</p> <p>Ultimate strength is dependent on strength of uprights & pole (in excess of 0.5 kN)</p> <p>Position Residual deflection / mm</p> <p>Mid-span, inward 0</p>	± 0.3 mm	PASS
6.3.1.1 Static loads – Horizontal load F_H – General	Each edge protection and each of its components, except toeboards, shall be designed to withstand a load $F_{HI} = 0.3$ kN applied perpendicular to the axis of the post	Position: Mid-span, inward 0.3 kN sustained for 1 minute without failure	± 50 N	PASS

EN 13374: 2004 CLAUSE / TEST	EN 13374: 2004 REQUIREMENT	RESULT / COMMENT	UoM (See note 2)	PASS / FAIL
6.3.6 Accidental loading	Any guardrail or intermediate guardrail or toeboard, regardless of its method of support, shall be capable of resisting a downwards point load $F_D = 1.25$ kN on a length of 100 mm	Position: Upright 1.33 kN sustained for 1 minute without failure Position: Mid-span 1.33 kN sustained for 1 minute without failure	± 50 N	PASS

ADDITIONAL INFORMATION / NOTES

Note 2 – ‘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%

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

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