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For the attention of: Gina Bogota

Technical Report

Subject: TESTING OF SRL DESCRIBED AS "PCGS20FT" & "BLOQUE

AUTORETRACTIL DE 6M 20FT (CODE 500876)" (VARIANT) IN

ACCORDANCE WITH ANSI Z359.14 - 2014

Our ref: SPC0222213/1407/10 Issue 8 Ext 2

Date: 6th April 2018

This is an extension of report reference SPC0222213/1407/10 Issue 8

Conditions of Issue:

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Results given in this report refer only to the samples submitted for analysis and tested by SATRA. Comments are for guidance only.

Tests marked † fall outside the UKAS Accreditation Schedule for SATRA. All interpretations of results of such tests and the comments based upon them are outside the scope of UKAS accreditation and are based on current SATRA knowledge.

A satisfactory test report in no way implies that the product tested is approved by SATRA and no warranty is given as to the performance of the product tested. SATRA shall not be liable for any subsequent loss or damage incurred by the customer as a result of information supplied in the report.

Report signed by: Daniel Harrison
Position: PPE Technologist
Department: Safety Product Centre

Harson





WORK REQUESTED

Samples of self-retracting device, described as "PCGS20FT", were received by SATRA on 22nd April & 24th November 2014, for testing in accordance with ANSI/ ASSE Z359.14 – 2014 Safety Requirements for Self-Retracting Devices for Personal Fall Arrest and Rescue Systems. (Version 2)

Additional samples were received on the 31st March 2017 for testing in accordance with ANSI Z359.14 – 2014 clause 3.1.5 only to verify addition of nickel plating process added to brake pawls would not affect corrosion resistance – see table 2 for results

Testing was initially carried out in accordance with ANSI Z359.14 – 2012 and the clauses shown below in the conclusions section have not changed in ANSI Z359.14 – 2014 to require further testing

This device can be obtained in a range of lengths PCGS15FT – PCGS20FT and variant 500876 15FT – 500876 20FT. The sample length tested was PCGS20FT

All testing was carried out on PCGS20FT variant

CONCLUSIONS

SAMPLE REFERENCE	STANDARD	CLAUSE / PROPERTY	SUB CLAUSE / PROPERTY	PASS / FAIL
0 10	1941 44	1' 610' C	3.1.1 Integral Connectors	PASS
72, 201, 001,	$\sim 00^{\circ}$	3.1.2 Locking Function	PASS	
50. " 17	500076 ANIGUEZA50.14	- 3.1 General Requirements	3.1.3 Energy Absorption	PASS
500076			3.1.4 Visual Indicator	PASS
500876	ANSI Z359.14 – 2014		3.1.5 Corrosion Protection	PASS
PCGS20FT	2014		3.1.6 Retraction Tension	PASS
. 20,	20, 150		3.1.7 Static Strength (SRL)	PASS
all of	IL OBIL		3.1.8 Dynamic Strength	PASS
The Maria	a Ar'	AT , a AT	3.1.9 Dynamic Performance	PASS

TESTING

Testing was carried out in accordance with ANSI Z359.14 - 2014 between 16th June & 24th December 2014

The retractable lanyard is a class B device and therefore has a maximum fall arrest distance of 1372mm

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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PPE Technologist
Safety Product Centre
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Figure 1 – Self-retracting device described as "PCGS20FT"



Figure 1a - Self-retracting device described as "BLOQUE AUTORETRACTIL DE 6M 20FT (CODE 500876)"







TEST RESULTS

Table 1 – Testing of Self-retracting device described as "PCGS20FT" in accordance with ANSI Z359.14 – 2014

ANSI Z359.14 – 2014 CLAUSE / TEST	ANSI Z359.14 – 2014 REQUIREMENT	TEST RESULTS	UoM (See note 1)	PASS / FAIL
3.1.1 Integral Connectors	Snap hooks or carabineers which are integral to self retracting devices shall meet the	Connector is marked as compliant with ANSI Z359.12		PASS
	requirements of ANSI Z359.12 Integral rings or similar openings intended to accept a snap hook or carabineer shall be designed to minimize the possibility of rollout	Possibility of rollout minimised	N/A	PASS
3.1.2 Locking Function	Self-retracting devices shall be automatic in their locking function	SRL automatically locks in the event of a fall	U`.	PASS
2010 201 APRIL 2018 APRIL 2018	It shall not be possible to override the self-locking feature of the device when in use	Self-locking mechanism cannot be overridden	N/A	PASS
211-22 APRIL	The design of the device shall prevent the possibility of performance being impaired by casual interference	Casual interference would not impair the performance of the device	18 AP	PASS
3.1.3 Energy Absorption	Self-retracting devices which have an energy absorption function shall be designed so that it works across the whole range of the device	Energy absorption is provided across the whole range of the device	N/A	PASS
3.1.4 Visual Indicator	Self-retracting devices shall have a visual indicator that will activate in accordance with the requirements of section 3.1.9	Visual indicator is included Indicator deployed successfully following each dynamic performance test	N/A	PASS

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ANSI Z359.14 – 2014 CLAUSE / TEST	ANSI Z359.14 – 2014 REQUIREMENT	TEST RESULTS	018 100	UoM (See note 1)	PASS / FAIL
3.1.5 Corrosion	Protection, at a	Corrosion test in accor	rdance with		
Protection	minimum, shall allow	ASTM B 117-07a-96	hours Neutral		
	the device to operate as	Salt Spray			
	intended and show no				
	signs of corrosion	Temperature: 35 °C			
	which, left unchecked,	Fall out rate: 1.1 ml/h			
	could result in a	pH of test solution: 4.5			
	corrosion related failure	Specific gravity of tes	t solution: 1.032		
	of the device after being	Sample 1			
	salt spray tested for 96				
	hours. Following the salt	Heavy white & black	scaling present on		
	spray test the device	connector. White scali			DAGG
	shall pay out the line,	eye bolt. No other visu	ual evidence of		PASS
	retract and lock	any corrosion present			
		Retraction tension foll	lowing corrosion		
		test			
		Length of line (m)	Force (N)		
		0.305	5.5		
	41 141	1.22	10.5	2 00/	
	0,000	2.44	13.0	±2.0%	
	11 120 011 1	3.66	21.0	OBIL	
	SIL DEIL	4.88	33.0	DK,	
	Dr. ob	6.10	52.0	7	
	012,0012.	Sample 2	, 50,	(20)	211-2
	APRIL APRIL 2018	Heavy white & black connector. White scali eye bolt. No other visu any corrosion present	ing also present on	18 AP	
	ARPRIL A	Retraction tension foll test	9, 010	² /2/5	PASS
	0100	Length of line (m)	Force (N)	12	
		0.305	14.75	IL OF	
	OKIL OKIL	1.10	15.9	O DI	
	N a N	2.20	24.3	10,	
	. ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	3.31	21.7	2	
	1 20 -11 12	4.41	29.65	DRIL!	
	IL OPIL	5.51	36.6	7, ~	







ANSI Z359.14 – 2014 CLAUSE / TEST	ANSI Z359.14 – 2014 REQUIREMENT	TEST RESULTS	018 301	UoM (See note 1)	PASS / FAIL
3.1.5 Corrosion	Protection, at a	Sample 3			
Protection	minimum, shall allow				
	the device to operate as	Heavy white & black	scaling present on		
	intended and show no	connector. White scal	ling also present on		
	signs of corrosion	eye bolt. No other vis	ual evidence of		
	which, left unchecked,	any corrosion present			
	could result in a				
	corrosion related failure	Retraction tension fol	lowing corrosion	12.00/	DAGG
	of the device after being	test		±2.0%	PASS
	salt spray tested for 96	Length of line (m)	Force (N)		
	hours. Following the salt	0.305	14.2		
	spray test the device	1.10	18.3		
	shall pay out the line,	2.20	22.65		
	retract and lock	3.31	25.7		
		4.41	28.7		
		5.51	37.35		







ANSI Z359.14 – 2014 CLAUSE / TEST	ANSI Z359.14 – 2014 REQUIREMENT	TEST RESULTS	018 mod	UoM (See note 1)	PASS / FAIL
3.1.6 Retraction	Retraction tension of the	Sample 1			
Tension	self-retracting device				
	line, shall not be less	Length of line (m)	Force (N)		
	than 1.25 pounds	0.305	14.0		
	(5.55N) or more than 25	1.22	10.0		
	Pounds (111.1N) at any	2.44	18.0		
	point in the range of	3.66	31.0		
	motion provided by the	4.88	34.5		
	line constituent	6.10	48.0		
	SRL-LE's shall retract without stopping when tested in a horizontal orientation	310mm lanyard length extracted from device Sample 2	n permanently)G	
		Length of line (m)	Force (N)		
	For SRL's and SRL-R's,	0.305	7.5		
	no more than 24 inches	1.22	15.5		
	(610mm) of the line can	2.44	21.0		
	remain extended when	3.66	33.5	±0.43%	PASS
	the device is fully	4.88	30.0	(1)	
	retracted.	6.10	45.0		
	For SRL-LE's, no more than 60 inches (1.5m) of the line can remain	310mm lanyard length extracted from device	n permanently	Pb//	
	extended when the	Sample 3			
	device is fully retracted	Length of line (m)	Force (N)	ON	
	Mr. a M	0.305	17.0	10/ J	
	$\phi' \sim 0.00$	1.22	22.0	λ , " λ	
	" 50 " " 50	2.44	22.0	DRIL	
	SIL OBIL	3.66	31.0	XY'	
	OF DELL'S	4.88	34.5	~18	
	~181 ~18'	6.10	38.5	20,	
	PRIL 20 PRIL	310mm lanyard length extracted from device	permanently	L APP	







ANSI Z359.14 – 2014	ANSI Z359.14 – 2014 REQUIREMENT	TEST RESULTS	UoM (See note 1)	PASS / FAIL
3.1.7 Static Strength	Self-retracting devices shall withstand a tensile load of 3,000 pounds (13.3kN) statically applied	Sample 1 13.35kN sustained for 1 minute without failure Sample 2 13.35kN sustained for 1 minute without failure	± 0.37% See note 2	PASS
3.1.8 Dynamic	SRL's & SRL-LE's	Sample 3 13.35kN sustained for 1 minute without failure Sample 1		
Strength	shall lock, remain locked until released and the test weight shall not strike the ground	136kg test mass held Additional information only)G	
	For SRL's and SRL-R's, the line shall retain a minimum of 1,000 pounds(4.4kN) of residual tensile strength after the dynamic test	Arrest distance: 2.32m Residual strength: 4.4kN sustained following dynamic strength test without failure Sample 2 136kg test mass held	U' APRIL 2018	
	2012 20 20 20 20 20 20 20 20 20 20 20 20 20	Additional information only Arrest distance: 3.02m Residual strength: 4.4kN sustained following dynamic strength test without	± 4.0% See note 2	PASS
	2018 APK. 2018 A	failure Sample 3 136kg test mass held Additional information only	2018 2018	
	11 2018 M 201	Arrest distance: 3.38m Residual strength: 4.4kN sustained following dynamic strength test without failure	PRIL ?	







L' -QIV	VAIL OU	· OL · VA VA	_ 2	
ANSI Z359.14 – 2014 CLAUSE / TEST	ANSI Z359.14 – 2014 REQUIREMENT	TEST RESULTS	UoM (See note 1)	PASS / FAIL
3.1.9 Dynamic	SRL's & SRL-LE's	Sample 1		
Performance	shall not exceed an	•		
	arrest distance of 54	128kg test mass held		
	inches (1,372mm) and			
	the average arresting	Peak arrest force: 3.4kN (see figure 2)		
	force shall not exceed	Arrest distance: 0.61m		
	900 pounds (4kN) or a	Average arrest force: 2.71kN		
	maximum peak of 1,800			
	pounds (8kN) for class	Device still able to retract and pay out in		
	B devices	accordance with 3.1.6		
		Visual indicator deployed		
	The locking function	Sample 2		
	must operate and the			
	device must pay out and	128kg test mass held		
	retract the line after	1201g tost mass note	Force	
	every dynamic	Peak arrest force: 3.0kN (see figure 3)	±0.37%	
	performance test	Arrest distance: 1.08m		PASS
	perfermance test	Average arrest force: 2.41kN	Height	17100
		Tiverage arrest force. 2. Tikiv	±0.22%	
		Device still able to retract and pay out in		
121 -1	8' ~18' -c	accordance with 3.1.6	0'	JO
$^{\prime}$	001. 2	Visual indicator deployed		001
	211-	Sample 3	DAIL	VSI.
OKIL	Kin Volum	Sample 5	N . S	31
DL. O DI	181	128kg test mass held	007	00
), ² /2,	2010	120kg test mass neid	1 10	111
. 20.	11 12 11	Peak arrest force: 3.4kN (see figure 4)	11 0	AIL .
211 - 2211	DRIL DKI	Arrest distance: 0.77m	O DY	· a P
W. W.	Mr. o M.	Arrest distance: 0.7/m Average arrest force: 2.78kN	181	VID,
-18 T -18	2, "V/D, "V	Average affest force. 2.70km), ' ()O. "
0, 00,	. 50, 50	Daviga still able to retreat and nove and in	1100	Sall
	all all	Device still able to retract and pay out in accordance with 3.1.6	BL.	V61
OFTIL	L. VELL - P		~ , ?	L. ~
VL, VI	ar ar	Visual indicator deployed	-076	







L DIL	OBIL OKIL	Dh. M. M.	S DI.	O DI
ANSI Z359.14 – 2014 CLAUSE / TEST	ANSI Z359.14 – 2014 REQUIREMENT	TEST RESULTS	UoM (See note 1)	PASS / FAIL
3.1.9 Dynamic	The visual indicator	Sample 1		
Performance	shall activate when	Wet conditioning: sample sprayed with		
(continued)	dynamic performance is	70 litres/hour of water for 3 hours. Test		
	tested and give clear	carried out within 90 seconds of removal		
	evidence that the device			
	has been impact loaded	128kg test mass held		
	The dynamic	Device still able to retract and pay out in		
	performance	accordance with 3.1.6		
	requirements shall also	Visual indicator deployed		
	be met after			
	conditioning to heat,	Peak arrest force: 2.4kN (See figure 5)		
	cold & wet, where the	Average arrest force: 2.32kN		
	average arresting force	Arrest distance: 1.30m		
	shall not exceed 1,125	Sample 2		
	pounds (5kN) or a	Wet conditioning: sample sprayed with		
	maximum peak of 1,800	70 litres/hour of water for 3 hours. Test		
	pounds (8kN) for Class	carried out within 90 seconds of removal		
	B devices		Force	
		128kg test mass held	±0.37%	
	61 ~101 -0	120kg test mass note	0.5770	
	00, 00	Device still able to retract and pay out in	Height	PASS
	oll all	accordance with 3.1.6	±0.22%	
	Kin VSL.	Visual indicator deployed	20.2270	
	-18 M -18 M		00 /	
	00,	Peak arrest force: 2.9kN (See figure 6)	11 1	
		Average arrest force: 2.42kN	111	
	OKIL DKI	Arrest distance: 0.97m	OPI	
	Mr. a M	Sample 3	10,	
), -V/D, ~V	Wet conditioning: sample sprayed with), '' (
	. 20 20	70 litres/hour of water for 3 hours. Test	211	
	211	carried out within 90 seconds of removal	BL.	
	L. Phi. D	carried out within 90 seconds of femoval	~ ~ 18	
	78 L 018,	128kg test mass held	50,	
	-all-all	Device still able to retract and pay out in	L NP	
	VAL. VAL.	accordance with 3.1.6	, ar	
	18 m	Visual indicator deployed	70, 2	
	11 20 21	Peak arrest force: 2.8kN (See figure 7)	ORIL.	
	VILL VELLIN	Average arrest force: 2.50kN	N .a	
	lar ar	Arrest distance: 0.93m	-010	







	VAIL OUI	OLI VAI VAI	~ 21	
ANSI Z359.14 – 2014	ANSI Z359.14 – 2014 REQUIREMENT	TEST RESULTS	UoM (See note 1)	PASS / FAIL
CLAUSE / TEST	The visual indicator	Comple 1		
3.1.9 Dynamic Performance	shall activate when	Sample 1		
		Cold conditioning: sample placed in a freezer at -40°C for 2 hours. Test carried		
(continued)	dynamic performance is	out within 90 seconds of removal		
	tested and give clear evidence that the device	out within 90 seconds of removal		
		1281 44 1-14		
	has been impact loaded	128kg test mass held		
	The demands	D		
	The dynamic	Device still able to retract and pay out in		
	performance	accordance with 3.1.6		
	requirements shall also	Visual indicator deployed		
	be met after			
	conditioning to heat,	Peak arrest force: 3.9kN (See figure 8)		
	cold & wet, where the	Average arrest force: 2.64kN		
	average arresting force	Arrest distance: 0.97m		
	shall not exceed 1,125	Sample 2		
	pounds (5kN) or a	Cold conditioning: sample placed in a		
	maximum peak of 1,800	freezer at -40°C for 2 hours. Test carried		
	pounds (8kN) for Class	out within 90 seconds of removal		
	B devices		Force	
- W	11	128kg test mass held	±0.37%	
~181 ~1	0, 2010, 20	1 0 0 0 0 0 0 0 0 0 0	\circ , \sim	PASS
10, 10, 10, 10, 10, 10, 10, 10, 10, 10,	. 20	Device still able to retract and pay out in	Height	rass
01/	211	accordance with 3.1.6	±0.22%	
	L. DALL	Visual indicator deployed	748	
	187 281	~42, ~410, ~41,0	00'	
	00° 00° .	Peak arrest force: 3.7kN (See figure 9)	1 6	
	011-6-011	Average arrest force: 2.93kN	11 0	
211 OPIL	OKIL DA	Arrest distance: 0.78m	0	
· · Ar ·	Dr. ap	Sample 3	40,	
~181 ~18	, ~~, ~~,	Cold conditioning: sample placed in a) , '' ,	
O_{i} O_{i}	. 20 . 20	freezer at -40°C for 2 hours. Test carried	2011	
	211- 2211	out within 90 seconds of removal	BI.	
DKIL VE	NY OF	out within 70 seconds of femovar	~ 76	
M - 018 L.	78 m 018'	128kg test mass held	50,	
11 20 -11 -2	-all-all	Device still able to retract and pay out in	V VPE	
AIL OFFILE	Volum Volum	accordance with 3.1.6	an	
18 PT -18	W 78 W 701	Visual indicator deployed	70. 2	
21,211 50,	11 20 . 21 . 20	Peak arrest force: 3.7kN (See figure 10)	ORIL!	
OPIL OF	IL BLILL	Average arrest force: 3.19kN	N . Q	
VL, ~ VL,	lar ar	Arrest distance: 0.27m	2010	







ANSI Z359.14 –	Shir Phi	W a A a A	2 h	8.1
2014	ANSI Z359.14 – 2014	TEST RESULTS	UoM	PASS /
CLAUSE / TEST	REQUIREMENT	120/1400210 (10)	(See note 1)	FAIL
3.1.9 Dynamic	The visual indicator	Sample 1		
Performance	shall activate when	Heat conditioning: sample placed in a		
continued)	dynamic performance is	heated chamber at 54°C & 85% relative		
	tested and give clear	humidity for 2 hours. Test carried out		
	evidence that the device	within 90 seconds of removal		
	has been impact loaded			
		128kg test mass held		
	The dynamic	Device still able to retract and pay out in		
	performance	accordance with 3.1.6		
	requirements shall also	Visual indicator deployed		
	be met after	2 1 2 2 1 1 1 2		
	conditioning to heat,	Peak arrest force: 3.1kN (See figure 11)		
	cold & wet, where the	Average arrest force: 2.42kN		
	average arresting force	Arrest distance: 0.80m		
	shall not exceed 1,125	Sample 2		
	pounds (5kN) or a	Heat conditioning: sample placed in a		
	maximum peak of 1,800	heated chamber at 54°C & 85% relative		
	pounds (8kN) for Class B devices	humidity for 2 hours. Test carried out		
	B devices	within 90 seconds of removal	Force	
	01 -401 C	128kg test mass held	±0.37%	
	00 1	Device still able to retract and pay out in		PASS
	211-	accordance with 3.1.6	Height	TASS
	KILL VOLVE	Visual indicator deployed	±0.22%	
	191 181	visual indicator deproyed	007	
	2010	Peak arrest force: 3.1kN (See figure 12)	1, 10	
	011	Average arrest force: 2.59kN	11 0	
	DKILL DKI	Arrest distance: 0.94m	OPI	
	Dr. a M	Sample 3	10,	
), 20,10, 20,	Heat conditioning: sample placed in a) . (((
	" 50 " " E	heated chamber at 54°C & 85% relative	DEIL-	
	SIL DEIL	humidity for 2 hours. Test carried out	XY O	
	, a DL, a b	within 90 seconds of removal	~16	
	~18, ~V/D.	2010 0010 001	30,	
	0,011-50.011	128kg test mass held	1- OF	
	VBKIIL VBKII	Device still able to retract and pay out in	, a Pi	
	12 18 M	accordance with 3.1.6	70 0	
	20,0	Visual indicator deployed	-21	
	IL ORIL	Peak arrest force: 2.5kN (See figure 13)	BL.	
	O DI. O DI	Average arrest force: 2.32kN	770	
	~10' ~10'	Arrest distance: 0.77m	00,	







Table 2 – Testing of Self-retracting device described as "PCGS20FT" with new nickel plated brake pawls in accordance with ANSI Z359.14 – 2014 clause 3.1.5

ANSI Z359.14 – 2014 CLAUSE / TEST	ANSI Z359.14 – 2014 REQUIREMENT	TEST RESULTS		UoM (See note 1)	PASS / FAIL
3.1.5 Corrosion	Protection, at a	Corrosion test in acco	rdance with		
Protection	minimum, shall allow	ASTM B 117-07a-96	hours Neutral		
	the device to operate as intended and show no	Salt Spray			
	signs of corrosion	Temperature: 35 °C			
	which, left unchecked,	Fall out rate: 1.1 ml/h	r		
	could result in a	pH of test solution: 6.	4		
	corrosion related failure	Specific gravity of tes			
	of the device after being	Sample 1		1	
	salt spray tested for 96	CHN			
	hours. Following the salt	Moderate scaling pres			
	spray test the device	and cable. No other vi		2 00 /	D . CC
	shall pay out the line, retract and lock	any corrosion present		±2.0%	PASS
		Retraction tension fol	lowing corrosion		
		test			
0 100	21	Length of line (m)	Force (N)		
210, 201	o. 2010 °C	0.305	7.15	· · · · ·	
50, " 50	-11 20 -11	1.22	25.00	OBIL	
OBIL O	SIL DEIL	2.44	27.75	Dr.	
MY, O W.	'ap ap	3.66	43.75	, 001	
p' ~\p'.	2010, 2010	4.88	42.40	. 20	
1, 20, 11	2 211	6.10	38.35	11 0	
AIL DEBIL	VBKIIL VBKII	See note 3	LI S AL	18 AT	18P







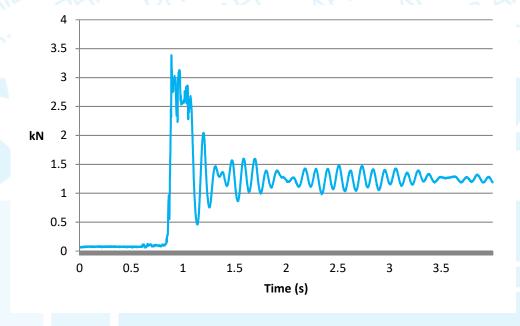


Figure 2 – Dynamic performance test: Graph of force vs. time

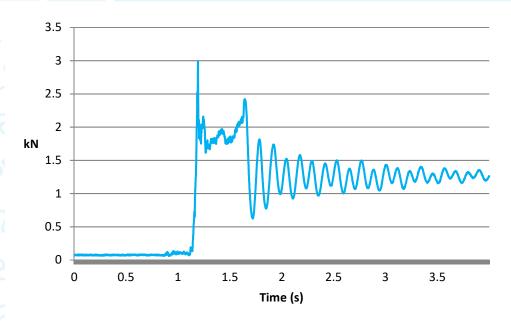


Figure 3 – Dynamic performance test: Graph of force vs. time







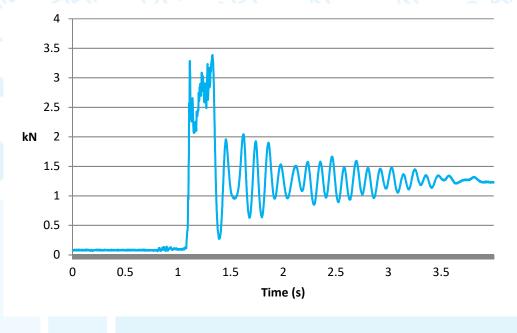


Figure 4 – Dynamic performance test: Graph of force vs. time

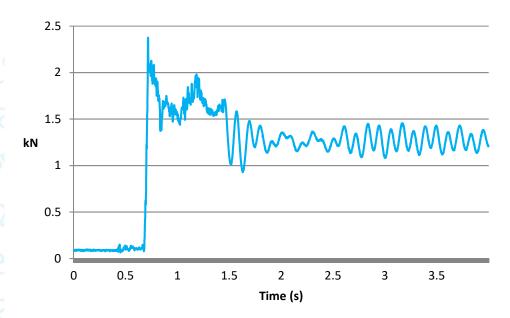


Figure 5 – Dynamic performance test: Graph of force vs. time







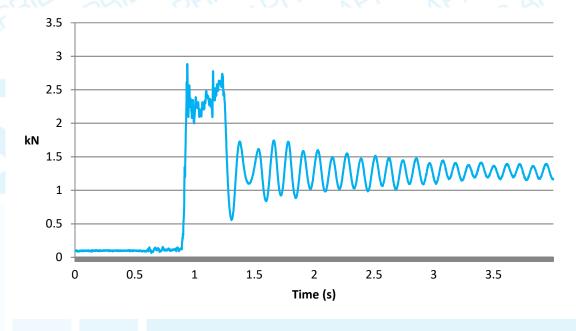


Figure 6 – Dynamic performance test: Graph of force vs. time

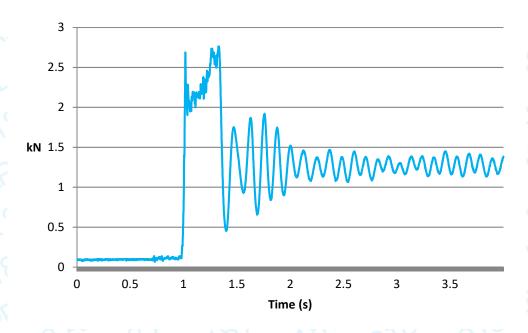


Figure 7 – Dynamic performance test: Graph of force vs. time

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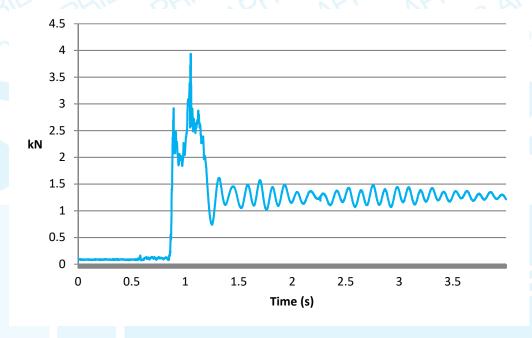


Figure 8 – Dynamic performance test: Graph of force vs. time

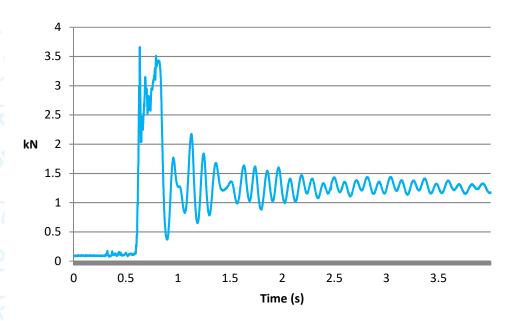


Figure 9 – Dynamic performance test: Graph of force vs. time







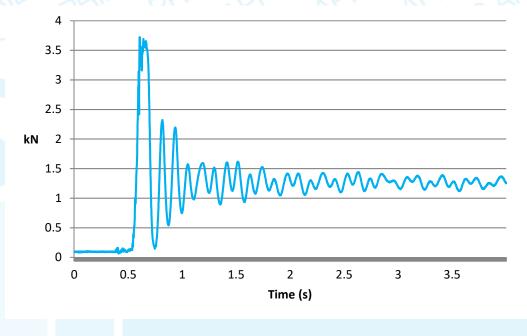


Figure 10 – Dynamic performance test: Graph of force vs. time

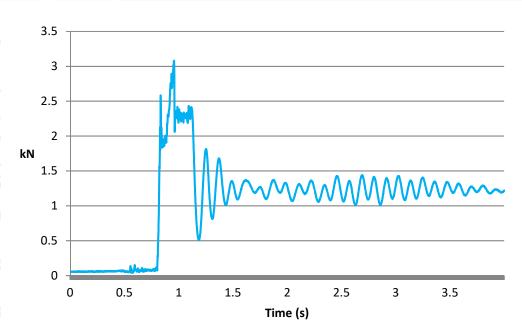


Figure 11 – Dynamic performance test: Graph of force vs. time







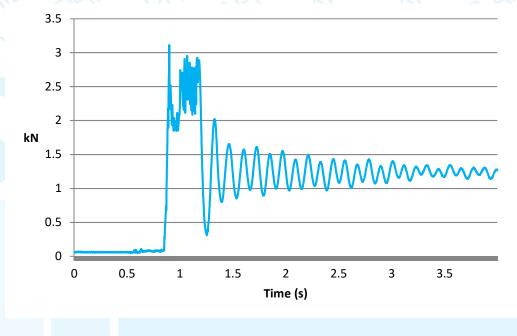


Figure 12 – Dynamic performance test: Graph of force vs. time

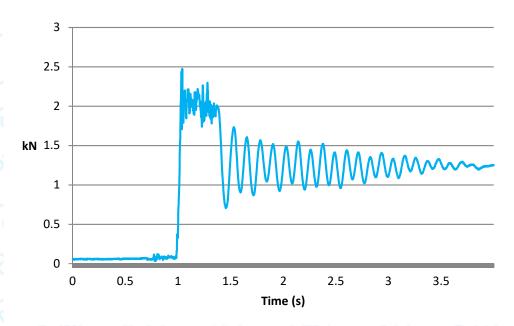


Figure 13 – Dynamic performance test: Graph of force vs. time







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- Testing carried out under job reference SPC0256038/1714

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TECHNOLOGY







TERMS AND CONDITIONS OF BUSINESS

1. GENERAL

Work done or services undertaken are subject to the terms and conditions detailed below and all other conditions, warranties and representations, expressed or implied are hereby excluded.

PRICES

Prices are based on current material and production costs, exchange rates, duty and freight and are subject to change without notice.

3. DELIVERY ESTIMATES

Delivery estimates are made in good faith and date from receipt of a written order and full information to enable us to proceed. While SATRA or its subsidiaries (hereafter referred to as "SATRA") make every effort to fulfil them, such estimates are subject to unforeseen events and if not maintained, cannot give rise to any claim. Offers "ex stock" are subject to prior sale.

4. CANCELLATION AND RETURNS

Cancellation of orders for goods, services, training or consultancy is only acceptable by prior agreement of <u>SATRA</u> and a charge will normally be made.

5. CLAIMS

Claims for errors, shortages etc should be notified within 10 days of date of receipt. In the event of goods damaged in transit, packing materials should be retained for examination; otherwise no liability can be accepted.

6. PAYMENT TERMS

Payment terms are net 21 days from date of invoice. Failure to comply with the terms of payment may result in delayed delivery of goods and services and a review of the Customer's credit account. Should the customer become subject to an administration order, or becomes bankrupt or goes into liquidation, SATRA has a right to cancel any contract and discontinue any work. SATRA reserves the right to adjust US Dollar and Euro sales price where customer exceeds credit terms and where the exchange rate has moved more than 10% since invoicing.

7. RETENTION OF TITLE

All goods remain the property of SATRA until paid in full. Under no circumstances will a customer's purchase order override SATRA's Retention of Title clause. In the case of software, the ownership of the software remains with SATRA. Payment of invoices in full will entitle the customer to use the software under licence until (a) they cease to be a member of SATRA or (b) they cease trading. In both instances, the licence shall then revert to SATRA.

8. GUARANTEE

All goods manufactured by SATRA are guaranteed both as regards material and workmanship. Any part returned carriage paid, within twelve months from date of supply and found defective, will be repaired or replaced at SATRA's option free of charge. SATRA admits no liability for loss, damage or delay consequent on any defect in any goods supplied by SATRA.

9. TEST REPORTS

Results given in test reports refer only to samples submitted for analysis and tested by SATRA. A satisfactory test report in no way implies that the product tested is approved by SATRA and no warranty is given as to the performance of the product tested. SATRA shall not be liable for any subsequent loss or damage incurred by the Customer as a result of information supplied in a test report.

10. TEST SAMPLES

Unless otherwise agreed in advance, test samples will be disposed of 6 weeks after the date of the final report. If required, samples can be returned at the Customer's expense.

11. RESPONSIBILITY

Every effort is made to ensure accuracy in description, drawings and other information in correspondence, catalogues, etc but no warranty is given in this respect and SATRA shall not be liable for any error therein. SATRA carries out all tests and/or advises only on the basis that the same are carried out, made or given without any responsibility whether for negligence or otherwise. SATRA and its servants or agents will not be liable for any damage or loss direct or indirect of whatsoever kind, whether or not the same results directly or indirectly from negligence on the part of SATRA or its servants or agents.

12. CONFIDENTIALITY

Unless specifically excluded in the terms of an individual contract between SATRA and its Customer, the following shall apply to all reports, advice, drawings, photographs, specifications or data:

- i. The above shall not be disclosed to third parties or used in litigation without the consent of SATRA.
- ii. Where SATRA has given consent to disclosure, the Customer shall draw the attention of the third party to these terms of business and the basis on which SATRA undertakes test, reporting and advising. The Customer shall indemnify SATRA for any failure to do so.
- iii. The above items are submitted to the Customer as confidential documents. Confidentiality shall continue to apply after completion of the business, but shall cease to apply to information or knowledge which may come into the public domain.

13. CONSTRUCTION AND ARBITRATION

The laws of England shall govern all contracts and the parties submit to exclusive jurisdiction of the courts of England, unless otherwise agreed.

Report by: Daniel Harrison VICSA Steelpro SPC0222213/1407/10 Issue 8 Ext 2 6th April 2018 Signed: Daniel Harrison
PPE Technologist
Safety Product Centre
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