



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
FACILITIES DEVELOPMENT DIVISION**

**APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0734

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Saft Ferak a.s

Manufacturer's Technical Representative: Radek Szotkowski

Mailing Address: Raškovice 247, 739 04 Pražmo

Telephone: +420 558 426 111

Email: radek.szotkowski@saftbatteries.com

Product Information

Product Name: UPS and Batteries

Product Type: Batteries

Product Model Number: Flex'ion Li-ion Battery System

General Description: Li-ion Battery System

Mounting Description: Rigid, Floor Mounted

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: Structural Integrity Associates Inc.

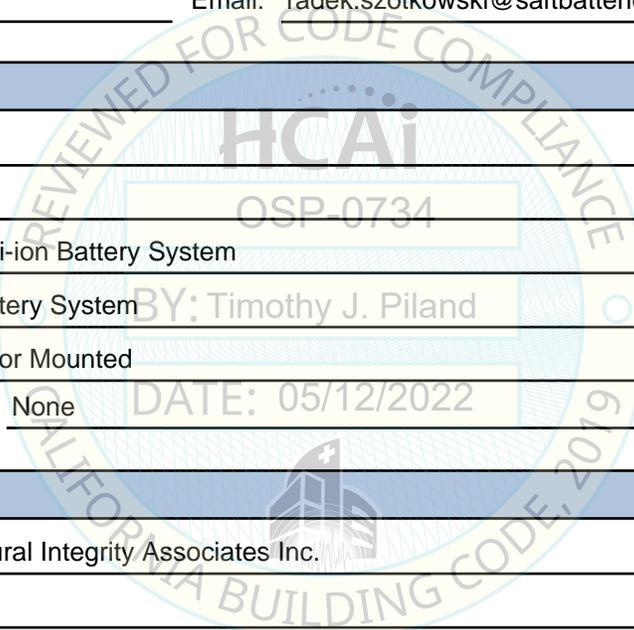
Contact Person: Katie Braman

Mailing Address: 233 SW Wilson Ave., Suite 101, Bend, OR 97702

Telephone: (541) 529-1947

Email: kbraman@structint.com

Title: Structural Integrity Associates Inc.





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California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC.

Name: Andrew Coughlin California License Number: S6082

Mailing Address: 5215 Hellyer Ave, Suite 101, San Jose, CA 95138-1025

Telephone: (415) 635-8461 Email: acoughlin@structint.com

Certification Method

GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3

Other (Please Specify): _____

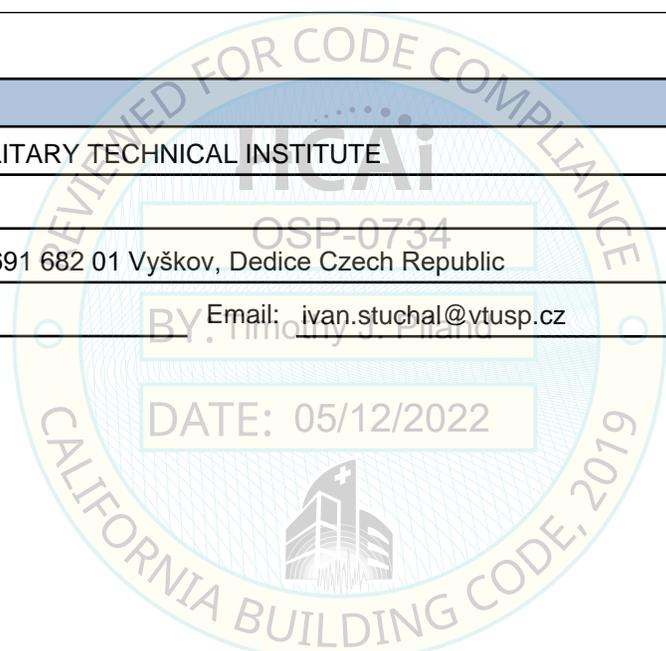
Testing Laboratory

Company Name: VTÚ – THE MILITARY TECHNICAL INSTITUTE

Contact Person: Ivan Štuchal

Mailing Address: Víta Nejedlého 691 682 01 Vyškov, Dedice Czech Republic

Telephone: +420 603 701 582 Email: ivan.stuchal@vtusp.cz





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.80 (SDS = 2.50 at z/h = 1), 1.13 (SDS = 2.50 and z/h = 0)

SDS (Design spectral response acceleration at short period, g) = 2.50 at z/h = 1, 2.50 at z/h = 0

a_p (Amplification factor) = 1.0

R_p (Response modification factor) = 2.5

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 05/12/2028

Date: 5/12/2022

Name: Timothy Piland Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = See Above z/h = See Above

Condition of Approval (if applicable): DATE: 05/12/2022



UNIT UNDER TEST (UUT) SUMMARY SHEET



2000037-CR-001-R2

Manufacturer: Saft America, Inc.	UUT 1
Model Line: Flex'ion Battery Cabinets	
Model Number: 14S1P-11S-1P1S-VL30PF _e G2 (100mm Base) Serial Number: 0011	

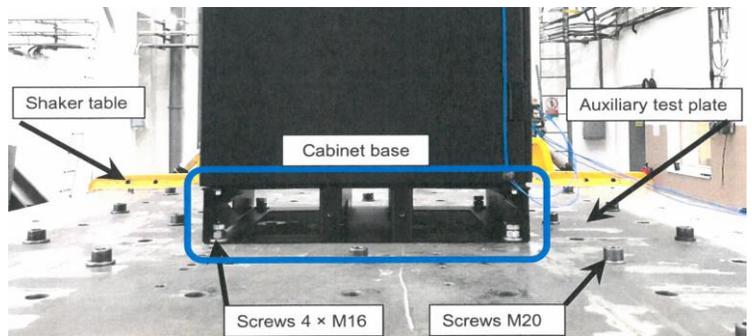
Product Construction Summary:
Carbon steel enclosure (1.5-2mm thickness, NEMA Type 1, IP20)

Options/Subcomponent Summary:
Enclosure size 2100/42U - SAFT, 11 battery modules (46PF_e G2) - SAFT, battery management module (BMM) - SAFT, battery HMI (7") - B&R Automation

<i>UUT Properties</i>						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
862.0	20.1	24.0	82.7	5.6	3.5	33.0

<i>UUT Highest Passed Seismic Run Information</i>									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2019	ICC-ES AC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67	
		2.5	0.0						

Test Mounting Details:



Rigid base mounted using four (4) class 8.8 M16 bolts and flat washers.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2000037-CR-001-R2



Manufacturer: Saft America, Inc.	UUT 2
Model Line: Flex'ion Battery Cabinets	
Model Number: 14S1P-11S-1P1S-VL30PFe G2 (110mm Base) Serial Number: 000044	

Product Construction Summary:
Carbon steel enclosure (1.5-2mm thickness, NEMA Type 1, IP20)

Options/Subcomponent Summary:
Enclosure size 2050/41U - SAFT, 11 battery modules (46PFe G2) - SAFT, battery management module (BMM) - SAFT, battery HMI (7") - B&R Automation

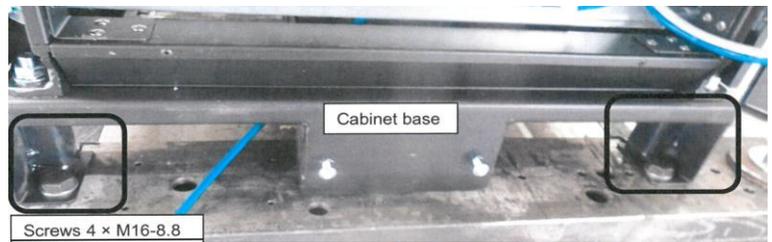
UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
859.8	20.1	24.0	80.7	6.9	5.4	29.8

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2019	ICC-ESAC156	2.5	1.0	1.5	4.00	3.00	1.67	0.67
		2.5	0.0					

Test Mounting Details:



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