APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY	
APPLICATION #:	OSP – 0377 – 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Eltek

Manufacturer's Technical Representative: Larry Lutz

Mailing Address: 2925 E. Plano Parkway, Plano, TX 75074

Telephone: (469) 330-9100 Email: Larry.Lutz@eltek.com

Product Information

Product Name: IBB-250WM and WME Battery Charger System

Product Type: Battery charger

Product Model Number: IBB-250WM and IBB-250WME (see Table 1 for specific model numbers)
(List all unique product identification numbers and/or part numbers)

General Description: Wall mounted battery charger system with 24VDC-140VDC output

Mounting Description: Rigid wall mounted

Applicant Information

Applicant Company Name: Tobolski Watkins Engineering, Inc.

Contact Person: Matthew Tobolski, PhD, SE

Mailing Address: 9246 Lightwave Ave, Suite 140, San Diego, CA 92123

Telephone: (858) 381-5843 Email: mtobolski@tobolskiwatkins.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

Signature of Applicant: Date: 12/24/13

Title: President and CEO Company Name: Tobolski Watkins Engineering, Inc.

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

Company Name: Tobolski Watkins Engineering, Inc.

Name: Matthew Tobolski, PhD, SE California License Number: S 5648

Mailing Address: 9246 Lightwave Avenue, Suite 140, San Diego, CA 92123

Telephone: (858) 381-5843 Email: mtobolski@tobolskiwatkins.com

Supports and Attachments Preapproval

☐ Supports and attachments are preapproved under OPM- _____
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)

☒ Supports and attachments are not preapproved

Certification Method

☒ Testing in accordance with: ☒ ICC-ES AC156

☐ Other (Please Specify): _____

Testing Laboratory

Company Name: National Technical Systems (NTS)

Contact Name: Don Bennett

Mailing Address: 1536 E. Valencia, Fullerton, CA 92831

Telephone: (714) 879-6110 Email: Don.Bennett@nts.com

Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: ☒ Yes ☐ No

Design Basis of Equipment or Components (F_p/W_p) = 1.88

S_{DS} (Design spectral response acceleration at short period, g) = 2.50

a_p (In-structure equipment or component amplification factor) = 2.5

R_p (Equipment or component response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.5

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component Natural Frequencies (Hz) = See attachments

Overall dimensions and weight (or range thereof) = See attachments

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: ☐ Yes ☒ No

Design Basis of Equipment or Components (V/W) =

S_{DS} (Design spectral response acceleration at short period, g) =

S_{D1} (Design spectral response acceleration at 1 second period, g) =

R (Response modification coefficient) =

Ω_0 (System overstrength factor) =

C_d (Deflection amplification factor) =

I_p (Importance factor) = 1.5

Height to Center of Gravity above base =

Equipment or Component Natural Frequencies (Hz) =

Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2010: ☐ Yes ☒ No

List of Attachments Supporting Special Seismic Certification

☒ Test Report(s) ☐ Drawings ☐ Calculations ☒ Manufacturer's Catalog

☒ Other(s) (Please Specify): Attachments

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2019

Signature: Date: 3/13/14

Print Name: M. R. Karim Title: SHFR

Special Seismic Certification Valid Up to : S_{DS} (g) = 2.5 z/h = 1.0

Condition of Approval (if applicable):

Table 1

Special Seismic Certification Certified Product Matrix

TWEI Project No.: 2013-0737-CO-001

Manufacturer: Eltek, Inc.

Model Line: IBB-250 WM and WME Battery Charger System

Certified Product Construction Summary:
Cabinet is constructed of painted galvanized steel. NEMA 1 rated.

Certified Options Summary:
Output voltage: shown in model number
Input voltage: 1ϕ-120/208/240V, 3ϕ-208/240V (phase shown in model number)
Internal component options are shown in Table 2

Certified Mounting Summary:
Rigid wall. SEOR to design anchorage.

Building Code: CBC 2013 | ***Seismic Certification Limits:*** S_{DS} = 2.50g | z/h = 1.0 | I_p = 1.5

Model Line	Model	Dimension (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
IBB-250WM	301300*: 1ϕ/48V	18.0	16.8	22.6	151		1
	325058*: 1ϕ/48V						
	301301*: 1ϕ/24V						
	325059*: 1ϕ/24V						
	301302*: 1ϕ/140V						
	310118*: 1ϕ/140V						
	311912*: 1ϕ/140V						
	301303*: 3ϕ/48V						
	325060*: 3ϕ/48V						
	301304*: 3ϕ/24V						
	325061*: 3ϕ/24V						
	301305*: 3ϕ/140V						
	320361*: 3ϕ/140V						
IBB-250WME	301306*: 1ϕ/140V	18.0	16.8	34.8	180		
	301307*: 3ϕ/140V						2

* Model may contain additional nomenclature to reflect software configurations

Table 2

Special Seismic Certification Certified Product Matrix

TWEI Project No.: 2013-0737-CO-001

Manufacturer: Eltek, Inc.

Model Line: IBB-250 WM and WME Battery Charger System – Subcomponents

Certified Product Construction Summary:
N/A

Certified Options Summary:
Specific internal component options are listed herein.

Certified Mounting Summary:
Subcomponents are installed within charger cabinet.

Building Code: CBC 2013 | ***Seismic Certification Limits:*** S_{DS} = 2.50g | ***z/h*** = 1.0 | I_p = 1.5

Model Line	Model	Dimension (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
Eaton Corporation Circuit Breakers	EGB3030FFG						
	EGB3050FFG						
	EGB2050FFG						
	EGB2080FFG						
	EGB3100FFG						
	EGB2100FFG						1,1
	JGE2150FAG						
	JGE3175FAG						2
	JGE2250FAG						2
Eltek, Inc. Smartpack2 I/O Monitor2	242100.500					Smartpack2 Master	1,2
	242100.501					Smartpack2 Basic	1
	242100.601					Smartpack2 Basic Industrial	2
	242100.502					I/O monitor	1,2
	242100.300					Battery monitor	1,2
	242100.301					Load monitor	1,2
Eltek, Inc. Flatpack2 Rectifiers	241115.205B						
	241115.205						
	241115.250						
	241115.705B						
	241115.705						1
	241115.805B						
	241115.805						
	241119.805						2

TOBOLSKI WATKINS ENGINEERING

UUT – 1

UNIT UNDER TEST (UUT)
Summary Sheet

TWEI Project No.: 2013-0737-CO-001

Manufacturer:	Eltek, Inc.
Model Line:	IBB-250 WM and WME Battery Charger System
Model Number:	301300 – IBB-250WM

Product Construction Summary:
Cabinet is constructed of painted galvanized steel. NEMA 1 rated.

Options/Subcomponent Summary:
1ϕ-48V output; 1ϕ-120/208/240V input; (2) Eaton Corporation Breakers: EBG2100FFG; (1) Eltek Smartpack2 Master (242100.500); (1) Eltek Smartpack2 Basic: 242100.501; (1) Eltek Smartpack2 I/O Monitor: 242100.502; (1) Eltek Smarkpack2 Battery Monitor: 242100.300; (1) Eltek Smartpack2 Load Monitor: 242100.301; (6) Eltek Rectifiers: 241115.705

UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
110	18.0	16.8	22.6	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2013	ICC-ES AC 156	2.50g	1.0	1.5	4.00g	3.00g	1.67g	0.67g

Test Mounting Details:

Mounted to test fixture using (4) 3/8" x 1" long lag bolts. Test fixture mounted to table using (16) ½" Grade 8 bolts.
Unit maintained structural integrity and remained functional per manufacturer requirement.
Contents were included in testing per operating conditions.

UUT – 2

UNIT UNDER TEST (UUT)
Summary Sheet

TWEI Project No.: 2013-0737-CO-001

Manufacturer:	Eltek, Inc.
Model Line:	IBB-250 WM and WME Battery Charger System
Model Number:	301307 – IBB-250WME

Product Construction Summary:
Cabinet is constructed of painted galvanized steel. NEMA 1 rated.

Options/Subcomponent Summary:
1ϕ-140V output; 3ϕ-208/240V input; (2) Eaton Corporation Breakers: JGE3175FAG and JGE2250FAG; (1) Eltek Smartpack2 Master: 242100.500; (1) Eltek Smartpack2 Basic Industrial: 242100.601; (1) Eltek Smartpack2 I/O Monitor: 242100.502; (1) Eltek Smarkpack2 Battery Monitor: 242100.300; (1) Eltek Smarkpack2 Load Monitor: 242100.301; (10) Eltek Rectifiers: 241119.805

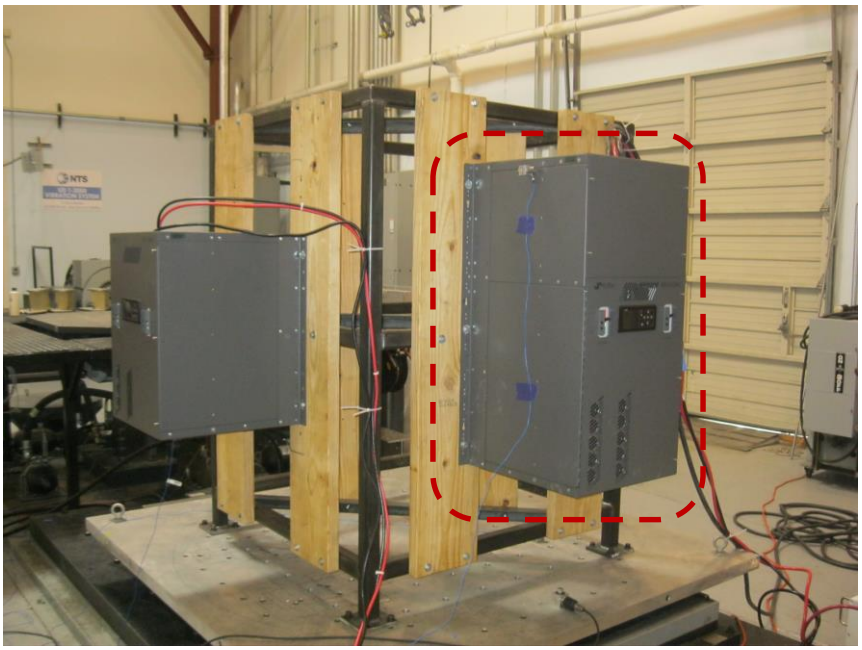
UUT Properties

Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
180	18.0	16.8	34.8	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S_{DS}	z/h	I_p	A_{FLX-H}	A_{RIG-H}	A_{FLX-V}	A_{RIG-V}
CBC 2013	ICC-ES AC 156	2.50g	1.0	1.5	4.00g	3.00g	1.67g	0.67g

Test Mounting Details:



Mounted to test fixture using (6) 3/8" x 1" long lag bolts. Test fixture mounted to table using (16) ½" Grade 8 bolts.
Unit maintained structural integrity and remained functional per manufacturer requirement.
Contents were included in testing per operating conditions.