



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP - 0440 - 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Vycon, Inc.

Manufacturer's Technical Representative: Octavio Solis

Mailing Address: 16323 Shoemaker Avenue, Cerritos, CA 90703

Telephone: 562-282-5507

Email: osolis@calnetix.com

Product Information

Product Name: VDC Flywheel

Product Type: Flywheel Energy Storage System

Product Model Number: VDC-XES, VDC-XXES

(List all unique product identification numbers and/or part numbers)

General Description: Flywheel DC energy storage system.

Mounting Description: Rigid base mounted.

Applicant Information

Applicant Company Name: TRU Compliance, LLC - A Tobolski Watkins Affiliate

Contact Person: Matthew J. Tobolski, Ph.D., S.E.

Mailing Address: 960 SW Disk Dr., Ste. 104, Bend, OR 97702

Telephone: 844-878-0200

Email: mtobolski@trucompliance.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: 07/20/2015

Title: President & CEO

Company Name: TRU Compliance, LLC

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA - HEALTH AND HUMAN SERVICES AGENCY
OSH-FD-759 (REV 10/21/14)



OSHPD

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

Company Name: TRU Compliance, LLC - A Tobolski Watkins Affiliate

Name: Matthew J. Tobolski, Ph.D., S.E. California License Number: S5648

Mailing Address: 960 SW Disk Dr., Ste. 104, Bend, OR 97702

Telephone: 844-878-0200 Email: mtobolski@trucompliance.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): _____

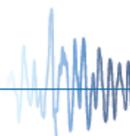
Testing Laboratory

Company Name: National Technical Systems

Contact Name: Don Bennet

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

Telephone: 714-879-6110 Email: don.bennett@nts.com





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Seismic Parameters

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

Design Basis of Equipment or Components (F_p/W_p) = 1.44 for $S_{DS} = 2.0g$ @ $z/h = 1.0$; 1.44 for $S_{DS} = 3.2g$ @ $z/h = 0.0$

S_{DS} (Design spectral response acceleration at short period, g) = 2.0 @ $z/h = 1.0$; 3.2 @ $z/h = 0.0$

a_p (In-structure equipment or component amplification factor) = 1

R_p (Equipment or component response modification factor) = 2.5

Ω_0 (System overstrength factor) = 2.5

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0 @ $S_{DS} = 2.0g$, 0.0 @ $S_{DS} = 3.2g$

Equipment or Component Natural Frequencies (Hz) = See Attachment

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

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) = _____

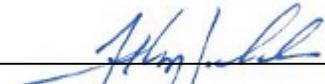
Tank(s) designed in accordance with ASME BPVC, 2010: Yes No

List of Attachments Supporting Special Seismic Certification

Test Report(s) Drawings Calculations Manufacturer's Catalog

Other(s) (Please Specify): Attachment A

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

Signature:  Date: August 10, 2015

Print Name: Timothy J. Pifand Title: SSE

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

Condition of Approval (if applicable): _____





A TOBOLSKI WATKINS AFFILIATE

UUT - 1

Unit Under Test (UUT) Summary Sheet

TWEI Project No.: 2015-0946-CO-001

Manufacturer: Vycon, Inc.

Model Line: VDC

Model Number: VDC-XXES **Serial Number:** U2000906

Product Construction Summary:
Painted carbon steel enclosure. Galvanized carbon steel frame and base.

Options/Subcomponent Summary:
Model number uniquely identifies subcomponents.

UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1,887	30.0	30.0	74.0	7.8	7.8	>33

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 AC156	2.0	1.0	1.5	3.2	2.4	1.33	0.53
		3.2	0.0	1.5	3.2	1.28	2.13	0.85

Test Mounting Details:



Rigid base mounted with (4) 5/8" grade 8 bolts.
Unit maintained structural integrity and remained functional per manufacturer requirement.
Contents were included in testing per operating conditions.



A TOBOLSKI WATKINS AFFILIATE

UUT - 2

Unit Under Test (UUT) Summary Sheet

TWEI Project No.: 2015-0946-CO-001

Manufacturer: Vycon, Inc.

Model Line: VDC

Model Number: VDC-XXES **Serial Number:** U2000907

Product Construction Summary:
Painted carbon steel enclosure. Galvanized carbon steel frame and base.

Options/Subcomponent Summary:
Model number uniquely identifies subcomponents.

UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1,886	30.0	30.0	74.0	7.4	6.9	>33

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 AC156	2.0	1.0	1.5	3.2	2.4	1.33	0.53
		3.2	0.0	1.5	3.2	1.28	2.13	0.85

Test Mounting Details:



Rigid base mounted with (4) 5/8" grade 8 bolts.
Unit maintained structural integrity and remained functional per manufacturer requirement.
Contents were included in testing per operating conditions.