APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY	
APPLICATION #:	OSP-0350-10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Maquet, Inc.

Manufacturer's Technical Representative: Rick McDaniel, Marketing Manager

Mailing Address: 45 Barbour Pond Drive, Wayne, NJ 07470

Telephone: (888) 627-8383 Email: Rick.mcdaniel@maquet.com

Product Information

Product Name: LED Concealed Lighting System (CLS)

Product Type: Mechanical Equipment

Product Model Number: USPWD300 CLS
(List all unique product identification numbers and/or part numbers)

General Description: *The CLS unit consists of a rigid ceiling-suspended cabinet, 120V motorized light and controller. Seismic enhancement made to the test units and modifications required to address the anomalies observed during the tests shall be incorporated into the production units.*

Mounting Description: *The unit is certified for a rigid ceiling mount installation.*

Applicant Information

Applicant Company Name: DYNAMIC CERTIFICATION LABORATORIES

Contact Person: JOSEPH L. LA BRIE, S.E., PRESIDENT / CEO

Mailing Address: 1315 GREG STREET, SUITE 109, SPARKS, NV 89431

Telephone: (775) 358-5085 Email: LABRIE@MAKEITRIGHT.NET

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: 7/24/13

Title: PRESIDENT / CEO Company Name: DYNAMIC CERTIFICATION LABORATORIES

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

Company Name: DYNAMIC CERTIFICATION LABORATORIES

Name: DR. AHMAD ITANI, S.E. California License Number: SE-5220

Mailing Address: 1315 GREG STREET, SUITE 109, SPARKS, NV 89431

Telephone: (775) 358-5085 Email: ITANI@SHAKETEST.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: DYNAMIC CERTIFICATION LABORATORIES

Contact Name: AUSTIN BROWN, P.E., LABORATORY MANAGER

Mailing Address: 1315 GREG STREET, SUITE 109, SPARKS, NV 89431

Telephone: (775) 358-5085 Email: AUSTIN@SHAKETEST.COM

Seismic Parameters

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

Design Basis of Equipment or Components (F_p/W_p) = 2.4

S_{DS} (Design spectral response acceleration at short period, g) = 2.00

a_p (In-structure equipment or component amplification factor) = 1.0

R_p (Equipment or component response modification factor) = 1.5

Ω_0 (System overstrength factor) = 1.5

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

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):

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

Signature: Date: 7/25/2013

Print Name: M. R. Karim Title: SHFR

Special Seismic Certification Valid Up to : S_{DS} (g) = 2.0 z/h = 1.0

Condition of Approval (if applicable):

Special Seismic
List of Tested Units

DCL Dynamic Certification Laboratories

Manufacturer: Maquet, Inc.

Product Line: LED Concealed Lighting System (CLS)

Approved Mounting Description: Rigid ceiling suspended

Product Line	Serial	Description	Operating Weight (pounds)	Cabinet Dimensions (inches)			Threaded Rod Hanger Diameter (in)	Hanger Rod Spacing (in)	Laterial Brace Material	Sds (g), z/h=1	Unit
				Length	Width	Height					
Concealed Light System, Model USPWD300CLS	1211/2488	Retracted, door closed	395	66	32	17.25	1/2	32 1/8	1-5/8 inch slotted channel	2.0	UUT1a
		Extended, door open								2.0	UUT1b
	1211/2489	Retracted, door closed	395	66	32	17.25	1/2	32 1/8	1-5/8 inch slotted channel	2.0	UUT2a
		Extended, door open								2.0	UUT2b

Special Seismic Certification
List of Certified Units

DCL Dynamic Certification Laboratories

Manufacturer: Maquet, Inc.

Product Line: LED Concealed Lighting System (CLS)

Approved Mounting Description: Rigid ceiling suspended

Product Line	Description	Operating Weight (pounds)	Cabinet Dimensions (inches)			Threaded Rod Hanger Diameter (in)	Hanger Rod Spacing (in)	Laterial Brace Material	Sds (g), z/h=1	Unit
			Length	Width	Height					
Concealed Light System, Model USPWD300CLS	Retracted, door closed	395	66	32	17.25	1/2	32 1/8	1-5/8 inch slotted channel	2.0	UUT1a, UUT1b, UUT2a, UUT2b
	Extended, door open									

Special Seismic Certification
Certified Components

DCL Dynamic Certification Laboratories

Manufacturer: Maquet, Inc.

Product Line: LED Concealed Lighting System (CLS)

ARM ASSEMBLY				
Component No.	**Component Mfg.**	**Description**	**Sds (g)**	**Unit**
567 501284	Maquet	Main 75	2.00	UU1a, UUT1b, UUT2a, UUT2b
567 501286	Maquet	Swing Arm 50-100 NM	2.00	UU1a, UUT1b, UUT2a, UUT2b

LIGHT HEAD				
Component No.	**Component Mfg.**	**Description**	**Sds (g)**	**Unit**
568 330931	Maquet	PowerLED 300 SF K3	2.00	UU1a, UUT1b, UUT2a, UUT2b

CONTROLLER				
Component No.	**Component Mfg.**	**Description**	**Sds (g)**	**Unit**
1211E-45E-40E/7	Maquet	Exam light dimmer control	2.00	UU1a, UUT1b, UUT2a, UUT2b
1211E-45E-40E/8	Maquet	Master ON/OFF switch - illuminated red	2.00	UU1a, UUT1b, UUT2a, UUT2b
1211E-45E-40E/10	Maquet	Door control switch - up/off-down positions	2.00	UU1a, UUT1b, UUT2a, UUT2b

UUT1a

UNIT UNDER TEST (UUT) Summary Sheet

Manufacturer: Maquet, Inc.

Product Line: LED Concealed Lighting System (CLS)

Model Number: USPWD300CLS (Serial Number: 1211/2488)

Product Construction Summary:

Powder-coated carbon steel

Options / Component Summary:

Tested with light retracted and door closed. 120V, rigid ceiling suspended cabinet, arm system, light head and controller

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Cabinet Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Length	Width	Height	Front-Back	Side-Side	Vertical
395	66.0	32.0	17.25	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2012 ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

The unit was rigid ceiling-mounted to the DCL shake table interface frame using (6) 1/2-13, UNC-2A threaded rod, Grade A36, spaced at approximately 32 inches on-center. Lateral braces were installed at each of the four corners; each brace consisted of a pair of B-Line B335-1/2 braces and a 12-inch long piece of slotted 1-5/8-inch channel. The shake table interface frame was attached to the shake table with M12 threaded rod spaced at approximately 8-inches on-center.

UUT1b

UNIT UNDER TEST (UUT) Summary Sheet

Manufacturer: Maquet, Inc.

Product Line: LED Concealed Lighting System (CLS)

Model Number: USPWD300CLS (Serial Number: 1211/2488)

Product Construction Summary:

Powder-coated carbon steel

Options / Component Summary:

Tested with door open and light extended. 120V, rigid ceiling suspended cabinet, arm system, light head and controller

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

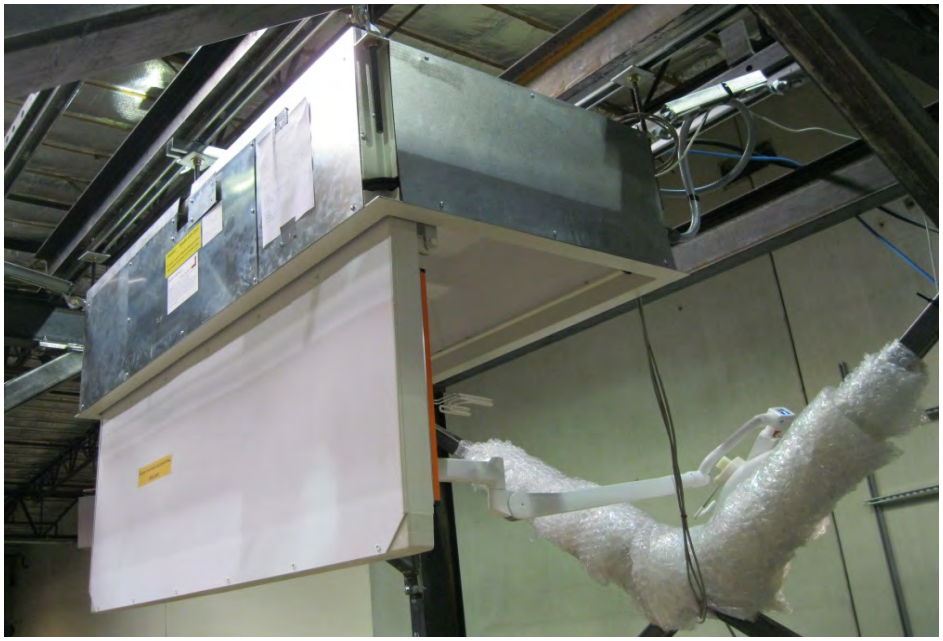
UUT Properties

Operating Weight (lb)	Cabinet Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Length	Width	Height	Front-Back	Side-Side	Vertical
395	66.0	32.0	17.25	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2012 ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:



The unit was rigid ceiling-mounted to the DCL shake table interface frame using (6) 1/2-13, UNC-2A threaded rod, Grade A36, spaced at approximately 32 inches on-center. Lateral braces were installed at each of the four corners; each brace consisted of a pair of B-Line B335-1/2 braces and a 12-inch long piece of slotted 1-5/8-inch channel. The shake table interface frame was attached to the shake table with M12 threaded rod spaced at approximately 8-inches on-center.

UUT2a

UNIT UNDER TEST (UUT) Summary Sheet

Manufacturer: Maquet, Inc.

Product Line: LED Concealed Lighting System (CLS)

Model Number: USPWD300CLS (Serial Number: 1211/2489)

Product Construction Summary:

Powder-coated carbon steel

Options / Component Summary:

Tested with light retracted and door closed. 120V, rigid ceiling suspended cabinet, arm system, light head and controller

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Cabinet Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Length	Width	Height	Front-Back	Side-Side	Vertical
395	66.0	32.0	17.25	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2012 ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

The unit was rigid ceiling-mounted to the DCL shake table interface frame using (6) 1/2-13, UNC-2A threaded rod, Grade A36, spaced at approximately 32 inches on-center. Lateral braces were installed at each of the four corners; each brace consisted of a pair of B-Line B335-1/2 braces and a 12-inch long piece of slotted 1-5/8-inch channel. The shake table interface frame was attached to the shake table with M12 threaded rod spaced at approximately 8-inches on-center.

UUT2b

UNIT UNDER TEST (UUT) Summary Sheet

Manufacturer: Maquet, Inc.

Product Line: LED Concealed Lighting System (CLS)

Model Number: USPWD300CLS (Serial Number: 1211/2489)

Product Construction Summary:

Powder-coated carbon steel

Options / Component Summary:

Tested with door open and light extended. 120V, rigid ceiling suspended cabinet, arm system, light head and controller

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained.

UUT Properties

Operating Weight (lb)	Cabinet Dimensions (inches)			Lowest Natural Frequency (Hz)		
	Length	Width	Height	Front-Back	Side-Side	Vertical
395	66.0	32.0	17.25	N/A	N/A	N/A

Seismic Test Parameters

Building Code	Test Criteria	Sds	z/h	Ip	Aflx-H	Arig-H	Aflx-V	Arig-V
CBC 2013	2012 ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	1.33	0.53

Unit Mounting Description:

The unit was rigid ceiling-mounted to the DCL shake table interface frame using (6) 1/2-13, UNC-2A threaded rod, Grade A36, spaced at approximately 32 inches on-center. Lateral braces were installed at each of the four corners; each brace consisted of a pair of B-Line B335-1/2 braces and a 12-inch long piece of slotted 1-5/8-inch channel. The shake table interface frame was attached to the shake table with M12 threaded rod spaced at approximately 8-inches on-center.