



APPLICATION FOR PREAPPROVAL SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

| |
|------------------------|
| APPLICATION NO. |
| OSP – 0296 – 10 |

Check whether application is: NEW RENEWAL

1.0 **SCHINDLER ELEVATOR** Denis Davis
Manufacturer *Manufacturer's Technical Representative*

1578 Sussex Turnpike, Randolph, NJ 07869
Mailing Address

(714) 669-7842 E-mail Address
Telephone

2.0 **HX-SERIES CONTROLLER & E-SERIES POWER UNITS** **ELEVATOR COMPONENTS**
Product Name *Product Type*

SEE ATTACHMENT 1

Product model No (List all unique product identification numbers and/or serial numbers)


General Description: Rigid base mounted components of the Schinder HX hydraulic elevator system.
Rigid wall mount Hall Fixture Interface box.

3.0 **EASE Co.** JONATHAN ROBERSON, S.E.
Applicant Company Name *Contact Person*

5877 Pine Ave, Suite 210, Chino Hills, CA. 91709
Mailing Address

(406) 541-EASE (3273) j.roberson@easeco.com
Telephone *E-mail Address*

I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the department for review.

 September 18, 2012
Signature of Applicant *Date*

Principal Engineer **EASE Co.**
Title *Company Name*



Registered Design Professional Preparing the Report

4.0 **EASE Co.**
Company Name

Jonathan Roberson, S.E. S4197
Contact Name *California License Number*

5877 Pine Ave, Suite 210, Chino Hills, CA. 91709
Mailing Address

909-606-7622 j.roberson@easeco.com
Telephone *E-mail Address*

California Licensed Structural Engineer Review and Acceptance of the Report

5.0 **EASE Co.**
Company Name

Jonathan Roberson, S.E. S4197
Contact Name *California License Number*

5877 Pine Ave, Suite 210, Chino Hills, CA. 91709
Mailing Address

909-606-7622 j.roberson@easeco.com
Telephone *E-mail Address*

Anchorage Pre-Approval

6.0

Anchorage is pre-approved under OPA-
 (Separate application for anchorage pre-approval is required)

Anchorage is not Pre-approved

Certification Method

70. Testing in accordance with: ICC-ES AC-156 Other (Please Specify):

Analysis

Experience data

Combination of Testing, Analysis, and/or Experience Data (Please Specify):

Testing Laboratory (if applicable)

8.0 Environmental Testing Laboratory, Inc. Brady Richard
Company Name *Contact Name*

11034 Indian Trail, Dallas, TX 75229-3513
Mailing Address

972-247-9657 brady@etldallas.com
Telephone *E-mail:*



Approval Parameters

9.0

Design in accordance with ASCE 7-05 Chapter 13: Yes No

Design Basis of Equipment or Components (F_p/W_p) = **0.9**

S_{DS} (Spectral response acceleration at short period) = **2.0g**

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

R_p (Equipment or component response modification factor) = **2.5**

I_p (Importance factor) = **1.5**

z/h (Height factor ratio) = **0**

Equipment or Component fundamental period(s) = **See Attachment 2**

Building period limits (if any) = **NONE**

Overall dimensions and weight (or range thereof) = **See Attachment 1**

Equipment or Components @ grade designed in accordance with ASCE 7-05 Chapter 15: Yes No

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

S_{DS} (Spectral response acceleration at short period) =

S_1 (Spectral response acceleration at 1 second period) =

R (Response modification coefficient) = 1.0

Ω_0 (System overstrength factor) = 1.0

C_d (Deflection amplification factor) = 1.0

I_p (Importance factor) = 1.5

Height to Center of Gravity above base =

Equipment or Component fundamental period(s) = Sec

Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2007: Yes No

10.0 List of attachments supporting the special seismic certification of equipment or components:

- Test Report
- Drawings
- Manufacturer's Catalog
- Calculations
- Others (Please Specify): **Attachments 1 & 2**

11.0 OSHPD Approval (For Office Use Only)


Signature & Date

March 28, 2013

Timothy J. Piland, SSE

Name & Title

December 31, 2019

Approval Expiration Date

S_{DS} (g) = **2.0** z/h = **0.0**

Special Seismic Certification Valid Up to

Condition of Approval (if any):

ATTACHMENT 1: SEISMIC CERTIFIED COMPONENTS

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Table 1: CERTIFIED PRODUCTS

| MANUFACTURER | | Schindler Elevator Corporation | | | | | |
|---|---|-------------------------------------|-------|--------|----------------|------------|-------|
| PRODUCT LINE | | HX-Series Controllers & Power Units | | | | | |
| COMPONENT | MODEL NO. | DIMENSIONS (IN.) | | | MAX. WT. (LB.) | MOUNTING | BASIS |
| | | W | D | H | | | |
| HX Controller Assembly w/ | -- | | | | | | |
| • HX-### Controller w/ 20/25/50HP Softstarter | Miconic HX-### | 44 | 32.25 | 57 | 768 | Rigid Base | UUT1 |
| • E1B Power unit | E1B | | | | | | |
| HX Controller Assembly w/ | -- | | | | | | |
| • HX-### Controller w/ 20/25/50HP Softstarter | Miconic HX-### | 51 | 32.25 | 57 | 820 | Rigid Base | INT |
| • E2B Power unit | E2B | | | | | | |
| HX Controller Assembly w/ | -- | | | | | | |
| • HX-### Controller w/ 20/25/50HP Softstarter | Miconic HX-### | 50.625 | 34.25 | 63.125 | 945 | Rigid Base | UUT2 |
| • E3B Power unit | E3B | | | | | | |
| Hall Fixture Interface (HFI) Box | MICONIC HX ###-HFI BOX | 17.375 | 11.5 | 14 | 29.5 | Wall | UUT3 |
| MOUNTING | <p>Rigid Base: a free-standing, base mounted (i.e. Floor Mounted) condition with the component rigidly attached to a supporting structure and no lateral support above the base</p> <p>Wall: refers to a condition where the unit is fully supported – both vertically and laterally – by a building wall or partition.</p> | | | | | | |
| NOTES | <p>1. BASIS:</p> <ul style="list-style-type: none"> • UUT#: Indicates that a test specimen matching these characteristics was tested. • INT (Interpolate): indicates a model that was not specifically tested, and by which seismic qualification was established through evaluation of testing of other, similar models in the product line. <p>2. ###: indicates a variable alphanumeric. Variations acceptable under this documents are "NI" & "MOD"</p> <p>3. Max. Weights tabulated for the HX- Controller Assemblies are "dry" weights and excludes the weight of hydraulic fluid present under typical operating conditions.</p> | | | | | | |

Table 2: CERTIFIED SUBCOMPONENTS TABLE

| INTERNAL SUBCOMPONENTS | MANUFACTURER | PART # | BASIS |
|---|--------------------------------|-------------|-------------|
| Enclosure | | | |
| Tank | Schindler Elevator Corporation | 1305D14 | UUT1 |
| Tank | Schindler Elevator Corporation | 1305D14 | UUT2 |
| Back Detail | Schindler Elevator Corporation | 1300D83H01 | UUT1 / UUT2 |
| Door, Left, Control Cabinet | Schindler Elevator Corporation | 1300D84H01 | UUT1 / UUT2 |
| Door, Right, Control Cabinet | Schindler Elevator Corporation | 1300D84H02 | UUT1 / UUT2 |
| Hydraulic Pump (GPM/LPM @ 600 psi) | | | |
| 16.7 / 63.2 | lmo Industries | 40USNP41 | |
| 22 / 83.3 | lmo Industries | 40USNP49 | |
| 37 / 140 | lmo Industries | 80USNP42 | |
| 44 / 166 | lmo Industries | 80USNP46 | |
| 48.2 / 182.4 | lmo Industries | *4PIC-187AJ | |
| 52.8 / 200 | lmo Industries | *4PIC-187Y | |
| 57.5 / 218 | lmo Industries | *4PIC-187P | |
| 62.6 / 237 | lmo Industries | *4PIC-187M | |
| 73.3 / 277 | lmo Industries | *4PIC-187 | UUT1 |

ATTACHMENT 1: SEISMIC CERTIFIED COMPONENTS

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| INTERNAL SUBCOMPONENTS | MANUFACTURER | PART # | BASIS |
|--|--------------------------------|--------------------|-------------|
| 82.5 / 312.2 | lmo Industries | *4PIC-217Y | |
| 92.5 / 350 | lmo Industries | *4PIC-217P | |
| 99.8 / 378 | lmo Industries | *4PIC-217M | |
| 117 / 443 | lmo Industries | *4PIC-217 | |
| 136.4 / 516 | lmo Industries | *4PIC-236G | |
| 155.3 / 588 | lmo Industries | *4PIC-236 | |
| 179.6 / 680 | lmo Industries | *4PIC-236AS | UUT2 |
| Motor | | | |
| 15 HP Motor | United States Electric Motors | 15 HP | |
| 20 HP Motor | United States Electric Motors | 20 HP | UUT1 |
| 25 HP Motor | United States Electric Motors | 25 HP | |
| 30 HP Motor | United States Electric Motors | 30 HP | |
| 40 HP Motor | United States Electric Motors | 40 HP | |
| 50 HP Motor | United States Electric Motors | 50 HP | UUT2 |
| Valve | | | |
| Valve | Elevator Equipment Corporation | UV-5A-T | UUT1 |
| Valve | Elevator Equipment Corporation | UV-5ATC | |
| Valve | Maxton | UC1A | UUT2 |
| Valve | Maxton | UC2A | |
| Float Switch Assembly | | | |
| Float Switch Assembly | Schindler Elevator Corporation | 6994C85 | UUT1 / UUT2 |
| Pressure Switch | | | |
| Pressure Switch | Schindler Elevator Corporation | 5065A39 | UUT1 / UUT2 |
| Transformer | | | |
| Transformer | Siemens Energy & Automation | 4AM4342-8DD40-0FA0 | UUT1 / UUT2 |
| Transformer | Siemens Energy & Automation | 4AM4342-8ED40-0FA0 | |
| Power Supply | | | |
| 100–240 V AC; 24 V (22.5–28.5 V dc Adjustable) | Sola Hevi-Duty | SDN 5-24-100C | UUT1 / UUT2 |
| Misc. | | | |
| Criphna Board | Schindler Elevator Corporation | 225725 | UUT1 / UUT2 |
| GC10360 Assembly | Schindler Elevator Corporation | 1300D99G01 | UUT1 / UUT2 |
| Elboni Assembly | Schindler Elevator Corporation | 1300D99G02 | UUT1 / UUT2 |
| EBCOM68 Assembly | Schindler Elevator Corporation | 1300D99G03 | UUT1 / UUT2 |
| Softstart Assembly | Schindler Elevator Corporation | 1300D88G01 | UUT1 / UUT2 |
| LONIOHI6 Assembly | Schindler Elevator Corporation | 1300D93G01 | UUT1 / UUT2 |
| Anti-Personnel Entrapment | Sola Hevi-Duty | S1K850 | UUT1 / UUT2 |

ATTACHMENT 2: TEST SPECIMEN SUMMARY

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| UUT-1 HX-NI Controller w/ E1B Power unit | | | | | | | | |
|--|--|-----------------|-------------------------|---------------------------------|--------------------|--------------------|--------------------|--------------------|
| MANUFACTURER: | Schindler Elevator Corporation | | | | | | | |
| IDENTIFICATION: | Model: HX-NI (Controller) Model: E1B (Power Unit) G.O. No.: GS227-01 G.O. No.: GS227-01 | | | | | | | |
| DESCRIPTION: | Schindler HX Hydraulic Elevator Controller mounted to the exterior wall of an E1B Power Unit. Controller included a Softstarter rated at 20HP/25HP/50HP at 200V/230V/480V. Power Unit included a 20 HP motor & 20HP pump Unit was tested with 110 gallons of (ISO 46) hydraulic fluid. Functional tests were performed at 208V. | | | | | | | |
| MOUNTING: | Rigid Base (Floor) Mounted using (4) – 5/8" dia grade 8 bolts with 1-3/4 o.d. washers to interface plate. | | | | | | | |
| a_P | 1 | | | | | | | |
| R_P | 2.5 | | | | | | | |
| PROPERTIES: | | | | | | | | |
| DIMENSIONS (in.) | | | Weight (lb.) | LOWEST RESONANT FREQUENCY (Hz.) | | | | |
| Width | Depth | Height | | X-Axis | Y-Axis | Z-Axis | | |
| 44 | 32.25 | 57 | 731 (dry) 1527 (wet) | 11.94 | 11.17 | 17.18 | | |
| SHAKE TABLE TEST PARAMETERS | | | | | | | | |
| 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 AC156-10 | 2.0 | 0.0 | 1.5 | 2.0 | 0.8 | 1.34 | 0.54 |
| Unit maintained structural integrity and functionality, after the ICC-ES AC 156 test | | | | | | | | |



| UUT-2 HX-MOD Controller with E3B Power Unit | | | | | | | | |
|--|--|-----------------|---------------------------|---------------------------------|--------------------|--------------------|--------------------|--------------------|
| MANUFACTURER: | Schindler Elevator Corporation | | | | | | | |
| IDENTIFICATION: | Model: HX-NI (Controller) Model: E3B (Power Unit) G.O. No.: 29925-01 G.O. No.: 29925-01 | | | | | | | |
| DESCRIPTION: | Schindler HX Hydraulic Elevator Controller mounted to the exterior wall of an E3B Power Unit. Controller included a Softstarter rated at 20HP/25HP/50HP at 200V/230V/480V. Power Unit included a 50 HP motor & 50HP pump Unit was tested with 220 gallons of (ISO 46) hydraulic fluid. | | | | | | | |
| MOUNTING: | Rigid Base (Floor) Mounted using (4) – 5/8" dia bolts with 1-3/4 o.d. washers to interface plate. | | | | | | | |
| a_P | 1 | | | | | | | |
| R_P | 2.5 | | | | | | | |
| PROPERTIES: | | | | | | | | |
| DIMENSIONS (in.) | | | Weight (lb.) | LOWEST RESONANT FREQUENCY (Hz.) | | | | |
| Width | Depth | Height | | X-Axis | Y-Axis | Z-Axis | | |
| 50.625 | 34.25 | 63.125 | 945 (dry) 2114.5 (wet) | 10.57 | 10.49 | 18 | | |
| SHAKE TABLE TEST PARAMETERS | | | | | | | | |
| 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 AC156-10 | 2.0 | 0.0 | 1.5 | 2.0 | 0.8 | 1.34 | 0.54 |
| Unit maintained structural integrity and functionality, after the ICC-ES AC 156 test | | | | | | | | |



ATTACHMENT 2: TEST SPECIMEN SUMMARY

ATTACHMENT PAGE | 2 OF 2

| UUT-3 HX-MOD Hall Fixture Interface (HFI) Box | | | | | | | | |
|--|---|-----------------|--------------|---------------------------------|--------------------|--------------------|--------------------|--------------------|
| <i>MANUFACTURER:</i> | Schindler Elevator Corporation | | | | | | | |
| <i>IDENTIFICATION:</i> | Miconic HX MOD-HFI BOX | | | | | | | |
| <i>DESCRIPTION:</i> | | | | | | | | |
| <i>MOUNTING:</i> | Wall mounted: (4) #10 Tek Screws with 1" o.d. fender washers through 5/8" wallboard to 16 ga steel backing plate. | | | | | | | |
| <i>a_P</i> | 1 | | | | | | | |
| <i>R_P</i> | 2.5 | | | | | | | |
| <i>PROPERTIES:</i> | | | | | | | | |
| DIMENSIONS (in.) | | | Weight (lb.) | LOWEST RESONANT FREQUENCY (Hz.) | | | | |
| Width | Depth | Height | | X-Axis | Y-Axis | Z-Axis | | |
| 17.375 | 11.5 | 14 | 29.5 | n/a | n/a | n/a | | |
| <i>SHAKE TABLE TEST PARAMETERS</i> | | | | | | | | |
| 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 AC156-10 | 2.0 | 0.0 | 1.5 | 2.0 | 0.8 | 1.34 | 0.54 |
| Unit maintained structural integrity and functionality, after the ICC-ES AC 156 test | | | | | | | | |

