Seismic and Wind Certification
General Assumptions and Disclaimer

All Seismic and Wind Certifications performed by Kinetics Noise Control, Inc., and/or its associates, unless clearly stated otherwise in the body of that certification document, will be performed in accordance with the assumptions and disclaimers identified herein.

Loads Considered

The loads considered in this certification are limited to those forces described in the seismic portion of the specified code for the project. If Kinetics Noise Control is not otherwise informed, the most recent version of the appropriate code will be used. Wind will not be considered during the analysis unless it is specified to be included in the seismic certification request. In the absence of wind velocity and the appropriate factors, Kinetics Noise Control will use 35 PSF as a wind load requirement. If this is not adequate, it is the responsibility of the Design Professional of Record to notify Kinetics Noise Control.

Extent of the Certification

The certification addresses those items that directly restrain a component or piece of equipment and are provided by Kinetics Noise Control. It includes the attachment weld, anchor or bolt that is required to affix the restraint to the building structure, or third-party support structure, and extends through the weld or bolt that attaches the restraint to the restrained component or piece of equipment. An example of a third-party support structure is a sheet metal roof curb or equipment rail or base not provided by Kinetics Noise Control. The certification does not cover the capabilities of the building structure or third-party support structure to withstand the seismic loading, nor does it cover the ability of the equipment, component or component frame to structurally withstand these same forces. Provided in the certification are the design horizontal and vertical loads at the attachment locations that can be used by others to evaluate the ability of the building or third-party support structure or piece of equipment to withstand these loads. Determination of the applicability of the certification design loads to a specific project remains the responsibility of the Design Professional of Record.

Equipment Data

The equipment weight, geometry, and CG data used to perform the certification have been provided to Kinetics Noise Control by others, no attempt has been made by Kinetics Noise Control to verify its accuracy and it is up those providing the information to do so. Where CG data is not provided, associates of Kinetics Noise Control will attempt to make reasonable yet conservative estimates as to the magnitude of any imbalance, although it must be recognized that the direction of the imbalance is often unknown. Unless the equipment orientation is obvious from the diagram in the certification document, it should be assumed that the orientation is not known. Under these conditions, the worst-case restraint, attachment and/or anchorage selection indicated for any particular location must be used for all locations.

KINETICS Noise Control
DUBLIN, OHIO, USA • MISSISSAUGA, ONTARIO, CANADA

Toll Free (USA only): 800-959-1229
International: 614-889-0480
Fax: 614-889-0540
World Wide Web: www.kineticsnoise.com
Email: sales@kineticsnoise.com

Equipment Durability

Kinetics Noise Control and its associates make no representations as to equipment durability and its ability to survive a seismic event and remain functional.

Installation

Where detailed installation procedures are not addressed in KNC-provided documentation, all seismic hardware and components must be installed in conformance with FEMA 412, 413, and 415. Free copies are available from FEMA (1-800-480-2520) or through Kinetics Noise Control.

Equipment, Restraint, and Component Attachment Holes

For seismic restraint, it is necessary that any attachment bolts positioned in the path between the equipment to be restrained and the building structure be a tight fit with their mating holes (the hole is to be not more than 1/16" in diameter larger than the attachment bolt). In the case of Kinetics Noise Control-supplied restraint components, attachment safety factors are based on hardware sized per the above. In the case of directly attached equipment, the hardware and components provided by Kinetics Noise Control are the minimum required to withstand the seismic loading. If attachment holes in the equipment exceed the recommendation above, the attachment hole is to be sleeved or grouted to bring its effective diameter down to not more than 1/16" larger than the attachment hardware used.

Anchor Capacity and Edge Distances

All anchor load allowables are based on ICBO test data and assume full anchor embedment in 3000 psi concrete and a minimum spacing between the anchor centerline and the edge of the slab into which it is sunk in accordance with the included anchorage data. The anchor data used is appropriate for the anchors provided by Kinetics Noise Control, unless otherwise noted. Under some conditions as noted in the calculations, undercut anchors may be required

Stamps

Stamped documents are intended to support the Engineer of Record on the project. If the project is located in an area for which Kinetics does not have a valid PE license, the documents will be stamped with a valid out-of-state seal. This practice is intended solely to indicate that a competent individual has reviewed the document. It is not intended to imply that the licensee is legally empowered to practice in the jurisdiction of the project.

General

Kinetics Noise Control, Inc., and its associates guarantees that we will use that degree of care and skill ordinarily exercised under similar conditions by reputable members of our profession to determine restraint and/or attachment safety factors based on customer-supplied input data. No other warranty, expressed or implied, is made or intended.

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