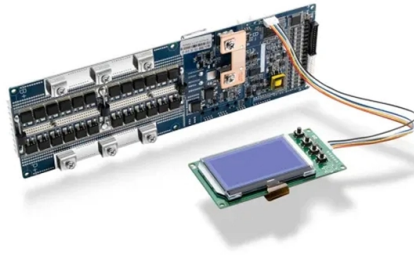


# Seismic Resistance Measures for Cable Tray Installation



## Overview

Engineers typically use seismic design codes and standards to determine the appropriate design parameters for cable trays based on the seismic hazard level of the site. Before diving deeper into the specifics, it's important to understand the various factors that. Cable tray and conduit systems have consistently performed well at conventional power and industrial facilities subjected to past strong-motion earthquakes larger than eastern U. plant safe shutdown earthquakes (1). This is so even though the systems are typically not designed for earthquake. An innovative bracing system was designed to provide lateral bracing for the cable tray system. These forces can cause ground shaking, which in turn can lead to the displacement, acceleration, and rotation of structures.

## Article Content

### SOLUTIONS

Engineer certified designs and site inspections Ezystrut offers a range of seismic solutions that comply with Australian Standard AS1170.4. Our one-stop solution for seismic bracing, cable tray, pipe

#### Seismic Cable Restraint Kits

Designed in compliance with ASCE 7 and the International Building Code (IBC), these kits offer multidirectional restraint and meet stringent requirements for life safety and equipment survivability

#### Reduction of seismic loads in cable tray hangers

Nuclear Engineering and Design 81 (1984) 403-410 403 North-Holland, Amsterdam  
REDUCTION OF SEISMIC LOADS IN CABLE TRAY HANGERS Britt K. PEARCE \*, John E.

#### Installing Seismic Restraints for Electrical Equipment

Raceways/Conduits/Cable Trays: Covers the different ways to install raceways, conduits, and cable trays. Attachment Types: Gives instructions on installing equipment in different arrangements known

#### Cable Trays Seismic Design: Protecting Power in Quake

Learn how I approach Cable Trays Seismic Design to protect power and data in earthquake-prone areas. Understand key principles, methods, and

#### Seismic analysis and design of electrical cable trays and support ...

The design aspects of electrical cable trays and support systems are discussed from the seismic and structural standpoint. The effects of the inherent flexibility of commonly used cable trays

### SEISMIC BRACING OF A DISTRIBUTED CABLE TRAY SYSTEM

Above these cabinets, are cable trays that provide power and communications cabling to the cabinets. Since the facilities were located in a area of high seismicity, the cable tray system was required to be

#### Vogle Electric Generating Plant (VEGP) Units 3 and 4 Updated ...

Cable Trays and Cable Tray Supports This appendix provides the design criteria for seismic Category I cable trays and their supports. Seismic Category II cable trays and their supports are also designed

#### Circuit Integrity of Cable Tray Wiring Systems During Natural Disasters

For those installations, Seismic Restrained Cable Tray Wiring Systems may be obtained by providing the proper multidirectional bracing for the cable tray supports.

Seismic fragility analysis of suspended cable trays in civil buildings ...

Post-earthquake investigations proved that the collapse of the cable tray led to the loss of human life and business continuity. This study aims to understand the seismic fragility of typical

KINETICS™ Pipe & Duct Seismic Application Manu

n the same way as trapeze supported pipe and duct. It is necessary for the conduit, bus ducts, and cable trays to be attached to the trapeze bars sufficiently to resist the design horizontal seismic Cable trays

What are the seismic design considerations for cable trays?

By carefully considering the material selection, component sizing, connection details, dynamic response, installation, and support, we can design cable tray systems

Seismic Protection Guidelines for Instrumentation Systems

Cable Tray Installation and Support Cable trays must be reliably installed, supported, and fixed to avoid collapse, breakage, or falling during seismic activity.

Evaluation of cable tray and conduit systems using the seismic ...

A method is developed for utilizing this data in defensible, simple seismic qualification criteria and configuration controls. Qualitative comparisons are used to demonstrate the applicability of the data

Understanding the Seismic Resistance of Cable Trays

This article discusses the importance of seismic resistance for cable trays, detailing when seismic braces are necessary, the factors that affect seismic

Cable Tray and Conduit System Seismic Evaluation Guidelines

When cable trays have vertical drops of more than about 20 feet and flapping of the cables during an earthquake might cause pinching or cutting of the cables or impact with proximate fragile equipment,

Cable Tray Checklist for High-Seismicity Projects

The seismic performance of a cable tray system depends just as much on the building connection as on the tray itself. Every hanger, trapeze, beam clamp, concrete insert, and post

SEISMIC BRACING OF A DISTRIBUTED CABLE TRAY SYSTEM

Seismic forces for the cable trays, including the cable weights, were calculated using the nonstructural component seismic provisions of the 1994 UBC, which was the applicable design code in effect.

Performance-based optimum seismic design of cable tray system

The seismic performance levels of cable tray systems are presented according to current seismic design codes. A performance-based optimum seismic design procedure for cable tray

#### Cable Tray SHIB NAL

Cable trays support cables across open spans in the same way that roadway bridges support traffic. Cable trays can provide a safe component of a power, low voltage control, data or

#### Performance-Based Earthquake Engineering Methodology for Seismic ...

Journal Pre-proof Performance-Based Earthquake Engineering Methodology for Seismic Analysis of Nuclear Cable Tray System

#### Appendix 3F Cable Trays and Cable Tray Supports

This appendix provides the design criteria for seismic Category I cable trays and their supports. Seismic Category II cable trays and their supports are also designed utilizing the design criteria of this appendix.

#### Westinghouse AP1000 Design Control Document Rev. 19

This appendix provides the design criteria for seismic Category I cable trays and their supports. Seismic Category II cable trays and their supports are also designed utilizing the design criteria of this appendix.

#### Performance-based optimum seismic design of cable tray system

A performance-based optimum seismic design procedure for cable tray systems is given and verified by three studied cases.

#### Seismic Restraints (Full)

All linear runs must have minimum two transverse seismic restraints and one longitudinal seismic restraint. A run is defined as a 1.5m length for duct and 3m length for any other linear non-structural

#### Seismic and cable tray solution flyer

Our team of experts can help you select the best cable tray series for your application, as well as designing your seismic bracing layout to ensure it meets applicable building codes and standards.

## Contact Us

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