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Loading, Analysis, and Design Criteria Related to the Installation, Alteration and Maintenance of Communication Structures

EFFECTIVE JANUARY 1, 2024

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July 2023

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Standard for Loading, Analysis, and Design Criteria Related to the Installation, Alteration, and Maintenance of Communication Structures

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Notes:

1. Normative annexes are integral parts of the Standard which for reasons of convenience are placed after other requirements of the Standard.
2. Informative annexes contain additional information and are not considered parts of the Standard.

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OBJECTIVE

The objective of this Standard is to provide minimum loading, analysis and design criteria related to the installation, alteration and maintenance of communication structures. The intent is to address the strength and stability requirements based on information provided by the owner or the contractor for a proposed construction or maintenance activity. In addition, structural requirements for lifting devices are provided along with load chart requirements.

This Standard is based on the information contained in a construction plan provided by the contractor and/or owner as required in the ANSI/ASSE A10.48-2023 standard.

The recommendations based on a structural analysis in accordance with this Standard by a qualified engineer for a communication structure is not intended to be construed as a review or approval of the means and methods outlined in a construction plan proposed for a construction or maintenance activity.

Information contained in this Standard was obtained from available sources and represents, in the judgment of the committee, the accepted industry minimum standard for criteria related to the installation, alteration and maintenance of communication structures. While it is believed to be accurate, this information should not be relied upon for a specific application without competent professional examination and verification of its accuracy, suitability, and applicability.

SCOPE

The scope of this Standard is limited to providing engineering criteria to evaluate strength and stability requirements related to the installation, alteration and maintenance of communication structures, based on construction loads as defined in a construction plan prepared in accordance with the ANSI/ASSP A10.48-2023 standard. Additionally, the scope includes design criteria for lifting devices and the generation of their load charts. The means and methods related to construction are not within the scope of this Standard.

This Standard provides criteria based upon both Load and Resistance Factor Design (LRFD) and Allowable Stress Design (ASD) methods.

Figures and drawings in this Standard are for illustration purposes only and are not intended to represent all potential aspects of construction.

1.0 GENERAL

1.1 Definitions

Allowable Stress Design: a design method utilizing working loads where the design strength of a structural component is equal to its minimum ultimate strength divided by a safety factor.

Basket: the lower support of a gin pole typically providing both vertical and lateral support.

Boom Line: line(s) used to lean/tilt the gin pole mast from true vertical when operated in tilted configuration.

Bridle: the upper support of a gin pole typically providing primarily lateral support when used in conjunction with a basket support.

Communication Structure: a structure used for transmitting and/or receiving electronic communication or broadcast signals.

Construction: field activities related to the installation, alteration or maintenance of antenna supporting structures and antennas.

Construction Duration: the period of time a structure is subject to construction loading.

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