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IEEE Guide to the Installation of Overhead Transmission Line Conductors

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Abstract: General recommendations for the selection of methods, equipment, and tools that have been found to be practical for the stringing of overhead transmission line conductors and overhead groundwires are provided.
Keywords: overhead transmission line conductors, overhead groundwires

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Introduction

(This introduction is not part of IEEE Std 524-2003, IEEE Guide to the Installation of Overhead Transmission Line Conductors.)

This guide provides general recommendations for the selection of methods, equipment, and tools that have been found to be practical for the stringing and grounding of overhead transmission line conductors and overhead groundwires. The following revisions have been made and are intended to improve the usefulness of the document:

a) The IEEE Std 524, Guide to the Installation of Overhead Transmission Line Conductors and the supplemental IEEE Std 524a, Guide to Grounding During the Installation of Overhead Transmission Line Conductors have been combined into one document.

b) The stringing specification for fiber optic cables has been expanded

c) A clause on All Dielectric Self-Supporting (ADSS) cable has been added

d) SSAC conductor type designation has been changed to the current ACSS designation

e) Helicopter installation methods have been expanded

f) All units have been changed to conform with IEEE metric policy

Participants

At the time this standard was revised, the membership of the Task Group of the Working Group on the Construction of Overhead Lines of the Towers, Poles, and Conductors Subcommittee, was as follows:

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The final conditions for approval of this standard were met on 17 October 2003. When the IEEE-SA Standards Board conditionally approved this standard on 11 September 2003, it had the following membership:

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IEEE Guide to the Installation of Overhead Transmission Line Conductors

1. Overview

1.1 Scope

This guide provides general recommendations for the selection of methods, equipment, and tools that have been found to be practical for the stringing of overhead transmission line conductors and overhead groundwires. The guide also includes a comprehensive list of definitions for equipment and tools used in stringing and for stringing terms commonly employed. This guide does not address special conductors such as those used for river and canyon crossing. These conductors may be custom designed and often may require special considerations.

1.2 Purpose

The purpose of this guide is to present in one document sufficient details of present day methods, materials, and equipment to outline the basic considerations necessary for maintaining safe and adequate control of conductors during stringing operations. References are given in Clause 2 and the bibliography in Annex A for those desiring more detailed information. Because the terminology used for many hardware items and for many stringing terms varies from place to place, a list of definitions is included to provide correlation and clarification of the terms most commonly employed.

1.3 Application

This guide is broad enough, yet specific enough, to be applicable to the stringing of conventional overhead transmission conductors and overhead groundwires (OHGW) of the following types: AAAC, AAC, AACSR, ACAR, ACSR, ACSR/TW, CU, aluminum-clad steel OHGW, and galvanized steel OHGW.[1] Since stringing practices for different projects will be strongly influenced by the magnitude and nature of each project and by local circumstances, alternate methods that have been successfully employed are presented. Information contained in this guide may not be sufficient for certain special cases, such as when stringing extremely long spans, severe line angles, high tensions, or special conductors. In these cases, the manufacturer should be consulted. The practices that are described in this guide provide for continuous control of the conductor from the initial setup to the ready-for-service condition. Any legal requirements of national, state, or local regulations must, of course, be observed.

[1]See 3.2 for definitions of all acronyms.

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