



IEEE Guide for Detection, Mitigation, and Control of Concentric Neutral Corrosion in Medium-Voltage Underground Cables

IEEE Power Engineering Society

Sponsored by the
Insulated Conductors Committee

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**Insulated Conductors Committee
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IEEE Power Engineering Society**

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Abstract: This guide provides a summary of the methods for detection, mitigation, and control of concentric neutral corrosion in medium-voltage, unjacketed, underground distribution cable installed direct buried or in conduit. The causes of corrosion in cable concentric neutral wires and straps and the methods available to detect this corrosion are described. The purpose of the concentric neutral and the consequences of significant loss of the concentric neutral are discussed. Recommendations are made for the mitigation and control of the cable concentric neutral corrosion.

Keywords: cable, cable systems, concentric neutral, corrosion, insulated conductor, power cable

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Introduction

This introduction is not part of IEEE Std 1617-2007, IEEE Guide for Detection, Mitigation, and Control of Concentric Neutral Corrosion in Medium-Voltage Underground Cables.

IEEE Std 1617-2007 is a new guide written over a seven-year period by a dedicated group of volunteer experts. The work was done through the Insulated Conductors Committee Working Group C7, Neutral Corrosion, which met formally twice a year from 2001 through 2004 to develop initial drafts. A total of seven drafts were produced and edited in the formal meetings and follow-up discussions and e-mail communications.

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Contents

1. Overview	1
1.1 Scope	1
1.2 Purpose	1
2. Normative references.....	2
3. Definitions	2
4. Purpose of the concentric neutral wires.....	2
4.1 Path for flow of charging currents	2
4.2 Path for flow of fault currents.....	3
4.3 Reduce step and touch potential	3
4.4 Provide a system neutral	3
4.5 Types of concentric wires.....	3
5. Consequences of significant neutral corrosion	3
5.1 Cable failures caused by loss of metallic shield component.....	3
5.2 Improper operation of protective devices	4
5.3 Stray currents and interference	4
5.4 Effects on power quality.....	4
5.5 National Codes	4
6. Causes of neutral corrosion	4
6.1 Galvanic corrosion cell	5
6.2 Corrosion cell set up on a single metal	5
6.3 Soil corrosion.....	6
6.4 Differential aeration.....	6
6.5 Unintended or stray electrical currents	6
6.6 The coating of concentric neutral wires.....	6
7. Detection and evaluation	7
7.1 Visual inspection	7
7.2 Test concentric neutral using a time domain reflectometer (TDR).....	7
7.3 Concentric neutral resistance measurement method.....	9
7.4 Surface voltage measurement technique.....	11