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IEEE Guide for In-Service Use, Care, Maintenance, and Testing of Conductive Clothing for Use on Voltages up to 765 kV AC and ±750 kV DC

IEEE Power and Energy Society

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Abstract: General recommendations for the in-service care, maintenance, and testing of the conductive clothing worn by workers to perform work in high-voltage fields are presented.

Keywords: clothing, conductivity, energized, IEEE 1067, maintenance, power lines

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Introduction

This introduction is not part of IEEE Std 1067-2012, IEEE Guide for In-Service Use, Care, Maintenance, and Testing of Conductive Clothing for Use on Voltages up to 765 kV AC and ±750 kV DC.

Conductive clothing minimizes discomfort due to the electric field by providing a shield around the worker's body.

The original development and testing of conductive suits dates back to the early 1960s. The success of these suits in relieving the worker from discomfort while working on lines up through 765 kV ac and ±750 kV dc has played an important role in the successful operation, maintenance, and continuity of service of these extremely high-voltage (EHV) lines.

A number of member companies within IEEE's Engineering in the Safety, Maintenance, and Operations of Lines (ESMOL) Subcommittee made it known that an in-service guide was needed to inspect and test conductive suits before a worker went up to the energized conductor.

Prior to drafting the first publication of this guide, a survey of the user community was conducted to determine if such a guide was needed and also to solicit user procedures for the purpose of sharing information. It was evident that little technical information was available. It was also learned, however, that information was needed. ESMOL was encouraged to research the subject and to summarize its findings in a guide.

This guide was revised to reflect advancements in the manufacturing and testing of conductive clothing. It is intended that the contents of this guide will be modified as future needs dictate. Suggestions for improvements and additions are welcome.

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IEEE Guide for In-Service Use, Care, Maintenance, and Testing of Conductive Clothing for Use on Voltages up to 765 kV AC and ±750 kV DC

1. Overview

1.1 Scope

This guide provides recommendations for the in-service visual inspection, use, care, maintenance, and electrical testing of conductive clothing, including suits, gloves, socks, and boots, for use during linework on voltages up to 765 kV ac and ±750 kV dc.

Testing pertains only to nondestructive electrical tests that can be performed periodically to check if there is any reduction in the conductivity of the clothing.