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IEEE Guide for Metric Conversion of Transformer Standards

IEEE Power Engineering Society

Sponsored by the
Transformers Committee



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Abstract: A consistent and accurate method of converting dimensions and quantities in transformer standards to SI units is provided in this guide.

Keywords: conversion, dimensions, metric, transformers, units

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Introduction

(This introduction is not part of IEEE Std C57.144-2004, IEEE Guide for Metric Conversion of Transformer Standards.)

In 1995, IEEE implemented a new metric policy (IEEE Policy 9.20), which directed that all IEEE publications undergo a transition from U.S. Customary (or inch-pound) units of measure to metric or Le Système International d'Unités (SI). The metric or SI system is the standard for science and engineering and in common usage in nearly all countries of the world except for the United States. The IEEE Policy directed that standards published after January 2000 were to be expressed solely in metric units.

Subsequently, the IEEE-SA Standards Board modified the policy on 11 September 2003 to allow some latitude in conversion from U.S. Customary to metric units. The revised policy is identified as Policy 9.19. The new policy states that standards should use metric units exclusively in the normative portions of the standard, but the use of metric units with parenthetical inch-pound units are also permitted.

Working groups and subcommittees of the IEEE Transformers Committee tried to make these conversions, but when the work of one body was compared with another, it was found that conversions were often made either inconsistently or incorrectly. The existing guide, IEEE/ASTM SI 10™-2002 and its predecessor, IEEE Std 268™-1992, were not being used as intended. Both documents are listed here because some important information regarding conversion of toleranced values has been omitted from the more recent guide. The Transformers Committee formed a Metric Conversion Task Force to address the problems encountered by the working groups in revising their standards. The Task Force presented tutorials for Transformers Committee members and is hereby creating an IEEE guide to create a better understanding of metric usage and of conversion methods as they apply to Transformer Standards.

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