PC57.91

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Type of Project: Modify Existing Approved PAR
PAR Request Date: 05-Aug-2011
PAR Approval Date: 10-Sep-2011
PAR Expiration Date: 31-Dec-2011
Status: Modification to a Previously Approved PAR for the Revision of a Standard
Root PAR: PC57.91 Approved on: 10-May-2005
Root Project: C57.91-1995

1.1 Project Number: PC57.91
1.2 Type of Document: Guide
1.3 Life Cycle: Full Use

2.1 Title: Guide for Loading Mineral-Oil-Immersed Transformers and Step-Voltage Regulators

3.1 Working Group: Insulating Life - Loading Guide Working Group (PE/TR/InsLife-WGC57.91)
Contact Information for Working Group Chair
Name: Don Duckett
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None

3.2 Sponsoring Society and Committee: IEEE Power and Energy Society/Transformers (PE/TR)
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4.1 Type of Ballot: Individual
4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 08/2011
4.3 Projected Completion Date for Submittal to RevCom: 10/2011

5.1 Approximate number of people expected to be actively involved in the development of this project: 100
5.2 Scope: This guide provides recommendations for loading mineral-oil-immersed transformers and step-voltage regulators with insulation systems rated for a 65 °C average winding temperature rise at rated load. This guide applies to transformers manufactured in accordance with IEEE C57.12.00 and tested in accordance with IEEE C57.12.90, and step-voltage regulators manufactured and tested in accordance with C57.15. Because a substantial population of transformers and step-voltage regulators with insulation systems rated for 55 °C average winding temperature rise at rated load are still in service, recommendations that are specific to this equipment are also included.

5.3 Is the completion of this standard dependent upon the completion of another standard: No
5.4 Purpose: Applications of loads in excess of nameplate rating involve some degree of risk. It is the purpose of this guide to identify these risks and to establish limitations and guidelines, the application of which will minimize the risks to an acceptable level.

5.5 Need for the Project: This document is being updated to reflect current industry practices and present the latest state-of-the-art in transformer loading practices. Some specific areas that will be addressed are the avoidance of free gas evolution, impact of transformer condition, such as oxygen and moisture content, on insulation aging and the ability to endure increased loading, and the need for coordination of maintenance practices with increased loading. Research in these areas has been ongoing since the previous revision, and it is the intention of this revision to incorporate the significant findings of this recent research. In addition, guidance for loading voltage regulators manufactured in accordance with C57.15 is being added. This particular equipment type was previously covered in a separate guide on loading (C57.95), however that document has been withdrawn. This revision effort is intended to make this guide more complete, providing equipment users with practical information that can be applied in the field.
5.6 Stakeholders for the Standard: Transformer manufacturers, owners and users.

Intellectual Property
6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No
6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No
7.2 Joint Development
   Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes (Item Number and Explanation):
2.1: We changed the title wording to match the scope.
5.2: C57.12.00 IEEE Standard for Standard General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers
C57.15 IEEE Standard Requirements, Terminology, and Test Code for Step-Voltage Regulators