Deutsche Akkreditierungsstelle GmbH

Annex to the Accreditation Certificate D-PL-11055-12-00 according to DIN EN ISO/IEC 17025:2005


Holder of certificate:

Siemens Aktiengesellschaft  
Materialprüflabor bei Siemens EM TS, Nürnberg  
Katzwanger Straße 150, 90461 Nürnberg

Tests in the fields:

determination of material properties of insulating liquids especially transformer oil and magnetic properties of electrical sheet for use in transformers

Abbreviations used: see last page

Within the given fields the laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, to use standard test methods listed here with different issue dates or revision status updates.
The laboratory maintains a current list of all test methods in a flexible scope of accreditation.

IEC 60567 2011          Oil-filled electrical equipment - Sampling of gases and analysis of free and dissolved gases - Guidance
IEC 62021-1 2003          Insulating liquids - Determination of acidity - Part 1: Automatic potentiometric titration
IEC 62021-2 2007          Insulating liquids - Determination of acidity - Part 2: Colourimetric titration

This document is a translation. The definitive version is the original German annex to the accreditation certificate.
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IEC 60247 2004
Insulating liquids - Measurement of relative permittivity, dielectric dissipation factor (tan d) and d.c. resistivity

IEC 60156 1995
Insulating liquids - Determination of the breakdown voltage at power frequency - Test method

IEC 61198 1993
Mineral insulating oils - Methods for the determination of 2-furfural and related compounds

IEC 60566 2010
Detection and determination of specified additives in mineral insulating oils - (3.2) Determination of 2,6-di-tert-butyl-para-cresol by infrared spectrometry - procedure B

IEC 60566 2010
Detection and determination of specified additives in mineral insulating oils - (Annex B) Analysis method for determination of passivators in petroleum products by High Performance Liquid Chromatography

EN 12766-1 2000
Petroleum products and used oils - Determination of PCBs and related products - Part 1: Separation and determination of selected PCB congeners by gas chromatography (GC) using an electron capture detector (ECD)

EN 12766-2 2001
Petroleum products and used oils - Determination of PCBs and related products - Part 2: Calculation of polychlorinated biphenyl (PCB) content

IEC 62535 2008
Insulating liquids - Test method for detection of potentially corrosive sulphur in used and unused insulating oil

EN 14210 2003
Surface active agents - Determination of interfacial tension of solutions of surface active agents by the stirrup or ring method

IEC 60450 2004 Amendment 1 2007
Measurement of the average viscometric degree of polymerization of new and aged cellulosic electrically insulating materials

IEC 60814 1997
Insulating liquids - Oil-impregnated paper and pressboard - Determination of water by automatic coulometric Karl Fischer titration

Period of validity: 14.11.2016 to 13.11.2021
Date of issue: 14.11.2016
# Annex to the accreditation certificate D-PL-11055-12-00

<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
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<tbody>
<tr>
<td>ISO 12185 1996</td>
<td>Crude petroleum and petroleum products - Determination of density - Oscillating U-tube method</td>
</tr>
<tr>
<td>ASTM D 7042 2016e2</td>
<td>Standard Test Method for Dynamic Viscosity and Density of Liquids by Stabinger Viscometer (and the Calculation of Kinematic Viscosity)</td>
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</tbody>
</table>

**Abbreviations used:**

- ASTM: American Society for Testing and Materials
- e2: Editorial Change
- IEC: International Electrotechnical Commission
- ISO: International Organization for Standardization

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- Translation - 3/3