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Power transformers - Part 15: Gas-filled power transformers

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Foreword

GB/T 1094 "Power Transformer" is divided into the following parts.

---Part 1.General Provisions;

---Part 2.Temperature rise of liquid immersed transformer;

- Part 3. Insulation level, insulation test and external insulation air gap;
- Part 4. Lightning impulse and operational impulse test guidelines for power transformers and reactors;
- Part 5. Ability to withstand short circuits;
- Part 6. Reactor;
- Part 7. Load guidelines for oil-immersed power transformers;
- Part 10. Sound level determination;
- Part 10.1. Application Guidelines for Sound Level Measurement;
- Part 11. Dry-type transformers;
- Part 12. Dry-type power transformer load guidelines;
- Part 14. Design and application of liquid-immersed transformers using high-temperature insulating materials;
- Part 15. Gas-filled power transformer;
- Part 16. Transformers for wind power generation;
- Part 18. Frequency response measurement;
- Part 23. DC bias suppression device.

This part is Part 15 of GB/T 1094.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

This part uses the redrafting method to modify and adopt IEC 60076-15:2015 "Power Transformer Part 15. Gas-filled Power Transformation Maker".

The technical differences between this part and IEC 60076-15:2015 and the reasons are as follows.

---Regarding normative reference documents, this section has made adjustments with technical differences to adapt to my country's technical conditions and adjustments.

The situation is collectively reflected in Chapter 2 "Normative Reference Documents", and the specific adjustments are as follows.

* Replace IEC 60076-1:2011 with GB/T 1094.1-2013 which is modified to adopt international standards;

* Replace IEC 60076-2:2011 with GB/T 1094.2-2013 which is modified to adopt international standards;

- * Replace IEC 60076-3 with GB/T 1094.3-2017 which is modified to adopt international standards;
- * Replace IEC 60076-5 with GB/T 1094.5 which is modified to adopt international standards;
- * Replace IEC 60076-10 with GB/T 1094.10 which is modified to adopt international standards;
- * Replace IEC 60137 with GB/T 4109 which is modified to adopt international standards;
- * Replace IEC 60480 with GB/T 8905 which is modified to adopt international standards;
- * Replace IEC 62271-1 with GB/T 11022 which is modified to adopt international standards;
- * Added reference to GB/T 12022 and GB/T 13499-2002;
- * Removed the reference to IEC 60376;

--- In order to adapt to my country's national conditions, in 5.10, "If capacitive bushing is used, dry bushing should be used, and on-load tap-changer should be Adopt inflatable switch";

---In order to adapt to the national conditions of our country, the nameplate mark content of "product model" was added in 8.2; and the "use of the IEC 60076-15.2015

To determine the maximum system short-circuit apparent capacity or current of the transformer withstand short-circuit capacity (if not infinite)

The content is adjusted from 8.2 to 8.3;

---In order to adapt to my country's national conditions, in 11.1.1, the ambient temperature during the test was changed from "10 degrees C~ 40 degrees C" to "5 degrees C~ 40 degrees C";

---In order to adapt to my country's national conditions, in 11.1.2.2."Insulating gas test" was added;

---In order to adapt to my country's national conditions, adjust the "winding to ground and DC insulation resistance measurement between windings" in 11.1.2.3 and 11.1.4 to 11.1.2.2.

This section also made the following editorial changes.

--- The last paragraph of Chapter 1 of IEC 60076-15.2015 is adjusted to the content of "Note 1" of this part, and IEC 60076-15.

The.2015 "Note" is adjusted to "Note 2";

---Adjust the content of the note in IEC 60076-15.20153.3 to 3.1 of this part;

---The title of 3.5 in IEC 60076-15:2015 was deleted, and 3.5.1, 3.5.2 and 3.5.3 were adjusted to 3.5, 3.6 and

3.7;

---Adjust the content of Note 2 in IEC 60076-15:2015 11.1 to the content of the main text;

---Adjust the article number 5.5 cited in item l) of IEC 60076-15:2015 6.2 to 6.5;

--- Deleted the text content of the penultimate paragraph in IEC 60076-15:2015 11.1.4;

---Adjust the content of the note in IEC 60076-15:2015 11.2 to the content of the main text;

--- Deleted the "vacuum pressure gauge" in the "Recommended Components for Gas-filled Power Transformers" in IEC 60076-15:2015 Table C.1;

---Adjust Appendix A and Appendix B in IEC 60076-15:2015 to Appendix B and Appendix A of this part;

---Adjusted references.

This part was proposed by China Electrical Equipment Industry Association.

This part is under the jurisdiction of the National Transformer Standardization Technical Committee (SAC/TC44).

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1 Scope

This part of GB/T 1094 specifies the terms and definitions, operating conditions, rated values and general requirements of gas-filled power transformers.

Requirements for a transformer with tapped windings, connection and connection group label, nameplate, safety, environmental and other requirements, deviations, tests, electromagnetic compatibility

(EMC), high-frequency operation transient, grounding terminal, and information needed for inquiries and orders.

This section applies to three-phase and single-phase gas-filled power transformers