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Comparison of Thermal Loads a Single-Phase Transformer With a Laminated Magnetic Core

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Краткое описание

Ключевые слова автора

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A promising direction for improving transformers is to transform structures and design of the electromagnetic systems. Rod and armored laminated magnetic cores of single-phase transformers are made of anisotropic electrical steel. Such magnetic circuits contain, respectively, four and six angular zones of magnetic flux direction change relative to the texture of steel with laminated joints, which causes significant additional losses. Improvement of single-phase transformers is possible by replacing named planar systems with a symmetrical radial electromagnetic system with three angular zones of three-rod magnetic circuit. Based on the method of invariant objective functions with dimensionless optimization components and universal relative controlled variables, mathematical models for determining the average thermal loads of the windings of the named variants of oil single-phase transformers with voltage up to 1000 V have been developed. The possibility of checking and comparing the thermal design constraint during the optimization of transformer is provided. The advantages of the radial electromagnetic system of a single-phase transformer with a three-rod magnetic circuit are shown. © 2022 IEEE.

Ключевые слова автора

comparison of options; energy saving; laminated magnetic circuit; single-phase transformer; thermal load

Включенные в указатель ключевые слова >

Engineering controlled terms

Electric loads; Laminating; Magnetic circuits; Magnetic cores; Silicon steel; Textures; Thermal load; Timing circuits

Engineering uncontrolled terms

Anisotropic electrical steels; Comparison of option; Electromagnetic systems; Energy savings; Energy-savings; Laminated magnetic circuit; Laminated magnetic cores; Optimisations; Single-phase transformers; Three-rod

Engineering main heading

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- 1 Shapoval, A., Kantemyrova, R., Markov, O., Chernysh, A., Vakulenko, R., Savchenko, I.
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- (2020) *Proceedings of the 25th IEEE International Conference on Problems of Automated Electric Drive. Theory and Practice, PAEP 2020*, art. no. 9240830. Цитировано 27 раз.
<http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=9240771>
ISBN: 978-172819935-1
doi: 10.1109/PAEP49887.2020.9240830
- [View at Publisher](#)
-
- 2 Kulynych, V., Shapoval, A., Dragobetskii, V.
Hard alloys recycling as a promising direction of technological equipment for machine-building production
- (2022) *Materials Science Forum*, 1052 MSF, pp. 423-428. Цитировано 19 раз.
<http://www.ttp.net/0255-5476.html>
ISBN: 978-303571841-6
doi: 10.4028/p-49mхgo
- [View at Publisher](#)
-
- 3 Shapoval, A., Savchenko, I., Markov, O.
Determination coefficient of stress concentration using a conformed display on a circle of a single radius
- (2021) *Solid State Phenomena*, 316 SSP, pp. 928-935. Цитировано 28 раз.
<http://www.ttp.net/1012-0394.html>
ISBN: 978-303573650-2
- [View at Publisher](#)
-
- 4 Savchenko, I., Shapoval, A., Gurenko, A.
Modeling Dynamic Parameters of Hard Alloys during Shock Wave Regeneration (Открытый доступ)
- (2020) *IOP Conference Series: Materials Science and Engineering*, 969 (1), art. no. 012079. Цитировано 27 раз.
<https://iopscience.iop.org/journal/1757-899X>
doi: 10.1088/1757-899X/969/1/012079
- [View at Publisher](#)
-
- 5 Hrudkina, N.S., Markov, O.E., Shapoval, A.A., Titov, V.A., Aliiev, I.S., Abhari, P., Malii, K.V.
Mathematical and Computer Simulation for the Appearance of Dimple Defect by Cold Combined Extrusion (Открытый доступ)
- (2022) *FME Transactions*, 50 (1), pp. 90-98. Цитировано 21 раз.
www.mas.bg.ac.rs/transactions/index.html
doi: 10.5937/fme2201090H
- [View at Publisher](#)
-
- 6 Stavinsky, A.A.
Genesis of structures and prerequisites for improving transformers and reactors by converting the circuits of electromagnetic systems (systems with laminated and twisted magnetic cores)
- (2011) *Electrical engineering and electromechanics*, 6, pp. 33-38.
-
- 7 Zagirnyak, M., Usatyuk, V.
Electromagnetic separators: The methods for the magnetization coil design
- (2020) *Przegląd Elektrotechniczny*, 96 (1), pp. 222-225. Цитировано 2 раз.
<http://www.pe.org.pl/articles/2020/1/50.pdf>
doi: 10.15199/48.2020.01.50
- [View at Publisher](#)
-

-
- 8 Sadvoy, O., Avdieieva, E., Vakhonina, L., Shebanin, V.
Comparison of the Active Parts of Single-Phase Transformers with Twisted and Laminated Magnetic Circuits
- (2021) *Proceedings of the 20th IEEE International Conference on Modern Electrical and Energy Systems, MEES 2021*. Цитировано 4 раз.
<http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?punumber=9598465>
ISBN: 978-166542366-3
doi: 10.1109/MEES52427.2021.9598597
- [View at Publisher](#)
-
- 9 Magdaleno-Adame, S., Kefalas, T.D., Garcia-Martinez, S., Perez-Rojas, C.
Electromagnetic finite element analysis of electrical steels combinations in lamination core steps of single-phase distribution transformers
- (2017) *2017 IEEE International Autumn Meeting on Power, Electronics and Computing, ROPEC 2017*, 2018-January, pp. 1-5. Цитировано 9 раз.
ISBN: 978-153860819-7
doi: 10.1109/ROPEC.2017.8261585
- [View at Publisher](#)
-
- 10 Stavinskiy, A.A., Avdeeva, E.A., Palchikov, O.O., Stavinskiy, R.A.
The generalized method of structural-parametric synthesis of electromagnetic systems of electrical machines and inductions devices. P. 1. The results of a comparative analysis of the options for three-phase electromagnetic transformer systems
- (2017) *Electricity*, 4, pp. 39-49. Цитировано 4 раз.
-
- 11 Zagirnyak, M., Prus, V., Rodkin, D., Zachepa, Y., Chenchvoi, V.
A refined method for the calculation of steel losses at alternating current
- (2019) *Archives of Electrical Engineering*, 68 (2), pp. 295-308. Цитировано 31 раз.
http://journals.pan.pl/Content/11902/PDF/art_o6.pdf?handler=pdf
doi: 10.24425/ae.2019.128269
- [View at Publisher](#)
-
- 12 Stavinsky, A.A., Tsyganov, A.N.
Structural and technological proposals for improving a single-phase transformer with a laminated magnetic circuit
- (2020) *Electrical engineering and electromechanics*, 6, pp. 11-17. Цитировано 3 раз.
-
- 13 Suechoey, B., Boonseng, C., Chompoonwai, C., Chompoo-Inwai, C.
Analysis of winding temperature and design of distribution transformer for improving short circuit withstand capability under renewable generations mixed environment
(Открытый доступ)
- (2018) *International Journal of Intelligent Engineering and Systems*, 11 (6), pp. 11-20. Цитировано 3 раз.
<http://www.inass.org/publications.html>
doi: 10.22266/IJIES2018.1231.02
- [View at Publisher](#)
-
- 14 Zagirnyak, M., Prus, V., Miljavec, D.
Improved method for calculation of parameters of electromagnetic and power processes in electric circuits with steel in saturation mode
- (2015) *Technical Electrodynamics*, 2015 (4), pp. 12-18. Цитировано 15 раз.
http://techned.org.ua/eng/index.php?view=article&id=812%3A2015-n4-s2&format=pdf&option=com_content&Itemid=77
-
- 15 Zagirnyak, M.V., Prus, V.V., Lyashenko, V.P., Miljavec, D.
Structuring soft-magnetic composite materials
- (2011) *Informacije MIDEA*, 41 (2), pp. 86-91. Цитировано 15 раз.
-

-
- 16 Almashakbeh, A.S., Prus, V., Zagirnyak, M.
Models for electric machine reliability prediction at variation of the condition of basic structural units
- (2017) *Przegląd Elektrotechniczny*, 93 (1), pp. 117-120. Цитировано 16 раз.
<http://sigma-not.pl/czasopisma-48-elektronika-energetyka-elektrotechnika-przeglad-elektrotechniczny.html>
doi: 10.15199/48.2017.01.28
- [View at Publisher](#)
-
- 17 Zagirnyak, M., Prus, V., Somka, O.
Reliability models of electric machines with structural defects
- (2015) *Proceedings - 2015 16th International Conference on Computational Problems of Electrical Engineering, CPEE 2015*, art. no. 7333389, pp. 249-251. Цитировано 16 раз.
ISBN: 978-617607804-3
doi: 10.1109/CPEE.2015.7333389
- [View at Publisher](#)
-
- 18 Prus, V.
The alteration of the energy parameters and losses components of electric machines in the process of their aging
- (2017) *Proceedings of the International Conference on Modern Electrical and Energy Systems, MEES 2017*, 2018-January, pp. 44-47. Цитировано 17 раз.
ISBN: 978-153861750-2
doi: 10.1109/MEES.2017.8248948
- [View at Publisher](#)
-
- 19 Li, T., Du, X., Sun, X., Song, Y.
Study on the method of calculating temperature rise of transformer (Открытый доступ)
- (2020) *E3S Web of Conferences*, 179, art. no. 01027.
www.e3s-conferences.org/
doi: 10.1051/e3sconf/202017901027
- [View at Publisher](#)
-
- 20 Rommel, D.P., Di Maio, D., Tinga, T.
Transformer hot spot temperature prediction based on basic operator information (Открытый доступ)
- (2021) *International Journal of Electrical Power and Energy Systems*, 124, art. no. 106340. Цитировано 13 раз.
<https://www.journals.elsevier.com/international-journal-of-electrical-power-and-energy-systems>
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