

Preparation of manuscript for Archives of Electrical Engineering

(Received: DD.MM.YEAR, revised: DD.MM.YEAR)

Abstract: This instruction provides guidance on the preparation of manuscripts for the Archives of Electrical Engineering (AEE) journal. Use this document as a template and an instruction set for your article. The electronic file containing your manuscript will be further formatted by the Technical Editor of AEE. Manuscript titles should include uppercase and lowercase characters. Avoid writing long formulas with subscripts in the title; short formulas that identify the elements are fine (e.g., "Nd-Fe-B"). Define all symbols used in the abstract. Do not cite references in the abstract. The abstract should be complete in itself and not exceed 250 words.

Key words: a list of 3-6 key words placed in an alphabetical order and separated by commas has to be added immediately after the abstract

1. Introduction

This instruction contains guidelines for preparing manuscripts for the AEE journal – Open Access publication. The document serves as a template for *Microsoft Word*. If you use the LaTeX format, please transfer your document to Microsoft Word and then use this Template.

Before you begin to format your paper, write and save the content as a separate text file. Keep your text and graphic files separate until after the text has been formatted and styled. Do not use hard tabs, and limit use of hard returns to only one return at the end of a paragraph. Do not add any kind of pagination anywhere in the paper. Do not number text heads-the template will do that for you.

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While editing your paper, make sure that all the mathematical characters (symbols, identifiers, variables, vectors, axis marks, etc.) have the required shape, thickness, and slant kept throughout the whole article. The same appearance of a given mathematic character must be retained regardless of its place (text, equations, tables or figures). The articles that don't conform to the above will not be processed and published.

2. Guidelines for AEE manuscript preparation

The manuscript submitted for publication should have no less than 12 pages. In the case of the manuscript longer than 20 pages, please contact the AEE Editorial Board before submitting your paper. The manuscript should be written on an A4 sheet in Times New Roman, 10pt font size, single line spacing, and 3.8 cm margins.

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Do not change the font sizes or line spacing to squeeze more text into a limited number of pages. Leave some open space around your figures.

3. Math

Please use the *MathML* editor as well as *MathType* editor to build an equation in your manuscript..

3.1. Equations

Equations should be typed within the text, centered, and should be numbered consecutively throughout the text. Their numbers should be typed in parentheses, flush right. Equations should be referred to in text, e.g. (1), except at the beginning of a sentence: "Equation (1) is ...". All symbols appearing in equations have to be defined in the text, before or just after the equation. Please keep the same font in the formulas and text.

If the symbols are written in Times New Roman use italic fonts. Symbols of **vectors** and **matrices** should be written in bold fonts. Do not italicize Capital Greek fonts and mathematical symbols like e.g.: the derivative symbol d , max, min, etc. The indices of symbols that are indices themselves should be written in a clear manner.

Use a long dash (“–”) rather than a hyphen for a minus sign.

$$\frac{d}{dt} \left(\frac{\partial E_m(\mathbf{i}, \alpha)}{\partial i_n} \right) + R_n i_n = u_n, \quad n \in \{1, 2, \dots, N\}, \quad (1)$$

where: E_m is co-energy, \mathbf{i} is the current vector, α is the angle describing the rotor position, R_n is the resistance, (NOT R_n - resistance), u_n is the total voltage of the n -th winding, etc. Note that the equation is centered using a center tab stop.

$$B_\Theta(\theta, r) = \lambda_0 \cdot \sum_{a=1}^3 \Theta_a(\theta, r), \quad (2)$$

where: λ_0 is the unit permeance and $\Theta_a(\theta, r)$ is the function of the MMF of winding “ a ”.

4. Unit symbols, abbreviations

Define abbreviations and acronyms the first time they are used in the text, even after they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, sc, dc, and rms do not have to be defined. Do not use abbreviations in the title or heads unless they are unavoidable.

SI units are recommended for use in formulas, drawings and tables., for example the SI unit for magnetic field strength H is A/m. Apply the center dot to separate compound units, e.g., “N·m.

Do not mix complete spellings and abbreviations of units: “Wb/m²” or “webers per square meter,” not “webers/m².” Spell units when they appear in text: “...a few henries...”, not “...a few H...”.

Use a zero before decimal points: “0.25,” not “.25.” Use “cm³,” not “cc.”

Unit symbols, SI prefixes as well as abbreviations should be writing in accordance with the IEEE standard – <http://www.ewh.ieee.org/soc/ias/pub-dept/abbreviation.pdf>

5. Guidelines for graphics preparation and submission

The illustrations (line diagrams and photographs) should be suitable for direct reproduction. The lettering as well the details should have proportional dimensions to maintain their legibility after the usual reduction.

All illustrations should be numbered consecutively (Fig. X). Tables are numbered with Arabic numerals.

All figures, figure captions, and tables in the text must be inserted into the correct places.

Figures, photos, tables or other parts of a manuscript that have previously appeared in another publication or are not the property of the authors must be properly acknowledged in the

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Photographs, colour, and greyscale figures should be at least at a resolution of 400 dpi.

All colour figures should be generated in the RGB or CMYK colour space, while greyscale images in the greyscale colour space.

Tables are numbered with Arabic numerals. Use 9 point Times New Roman for the title of the table and 9 point Times New Roman for the filling of the table (9 in the case of symbols with subscripts).

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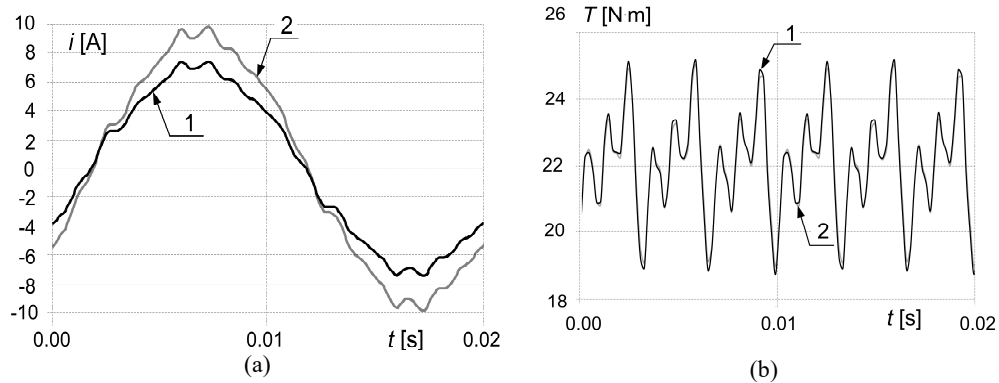


Fig. 1. Results of current and torque calculation for methods 1 and 2: current i versus time (a); torque T versus time (b)

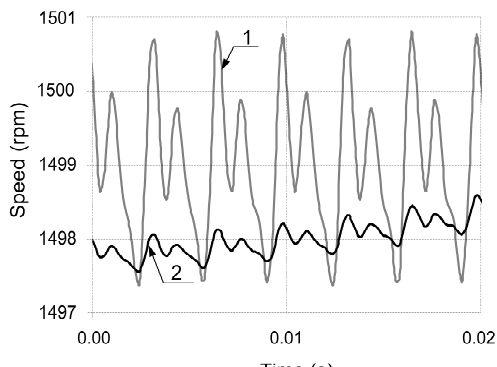


Fig. 2. Rotor speed as a function of time for motors 1 and 2

Tables are numbered with Arabic numerals. Use 9 point Times New Roman for the title of the table and 9 point Times New Roman for the filling of the table (9 in the case of symbols with subscripts).

Table 1. Title of the table

Parameter name	Symbol	Value	Unit
Inductance 1	L_1	1.125	mH
Resistance 1	R_1	100	m Ω
Inductance 2	L_2	1.125	mH
Resistance 2	R_2	100	m Ω

6. Conclusions

A conclusion might elaborate on the importance of the work or suggest applications and extensions. Although a conclusion may review the main points of the manuscript, do not replicate the abstract as the conclusion.

Appendix

Appendixes, if needed, appear before the acknowledgment.

Acknowledgements

Use the singular heading even if you have many acknowledgments.

References

References in text must be numbered consecutively by Arabic numerals placed in square brackets. Please make sure that you use full names of journals i.e. *Archives of Electrical Engineering*. Please ensure that all references in the Reference list are cited in the text and vice versa.

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Journal manuscript

- [1] Author1 A., Author2 A., *Title of paper*, Title of periodical, vol. x, no. x, pp. xxx-xxx (YEAR), DOI:10.24425/ae.2021.ABCDEF.
example
- [2] Steentjes S., von Pfingsten G., Hombitzer M., Hameyer K., *Iron-loss model with consideration of minor loops applied to FE-simulations of electrical machines*, Archives of Electrical Engineering, vol. 49, no. 7, pp. 3945–3948 (2019), DOI:10.24425/ae.2021.ABCDEF.
- [3] Idziak P., *Computer Investigation of Diagnostic Signals in Dynamic Torque of Damaged Induction Motor*, Electrical Review (in Polish), to be published.
- [4] Cardwell W., *Finite element analysis of transient electromagnetic-thermal phenomena in a squirrel cage motor*, submitted for publication in IEEE Transactions on Magnetics.

Conference manuscript

- [5] Author A., *Title of conference paper*, Unabbreviated Name of Conf., City of Conf., Country of Conf., pp. xxx-xxx (YEAR).
example
- [6] Popescu M., Staton D.A., *Thermal aspects in power traction motors with permanent magnets*, Proceedings of XXIII Symposium Electromagnetic Phenomena in Nonlinear Circuits, Pilsen, Czech Republic, pp. 35–36 (2016).

Book, book chapter and manual

- [7] Author1 A., Author2 A.B., *Title of book*, Name of the publisher (YEAR).
example
- [8] Zienkiewicz O., Taylor R.L., *Finite Element method*, McGraw-Hill Book Company (2000).

Patent

- [9] Author1 A., Author2 A., *Title of patent*, European Patent, EP xxx xxx (YEAR).
example
- [10] Piech Z., Szlag W., *Elevator brake with magneto-rheological fluid*, European Patent, EP 2 197 774 B1 (2011).

Thesis

- [11] Author A., *Title of thesis*, PhD Thesis, Department, University, City of Univ. (YEAR).
example
- [12] Driesen J., *Coupled electromagnetic-thermal problems in electrical energy transducers*, PhD Thesis, Faculty of Applied Science, K.U. Leuven, Leuven (2000).

Electronic forms

- [13] Author A., *Title of article*, in [Title of Conference, record as it appears on the copyright page], © [applicable copyright holder of the Conference Record] (copyright year), doi: [DOI number].
example

- [14] Kubo M., Yamamoto Y., Kondo T., Rajashekara K., Zhu B., *Zero-sequence current suppression for open-end winding induction motor drive with resonant controller*, in IEEE Applied Power Electronics Conference and Exposition (APEC), © APEC (2016), doi: 10.1109/APEC.2016.7468259

Website

- [15] <http://www.aee.put.poznan.pl>, accessed April 2010.

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