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Instructions for the preparation of a Archives Material Science and Engineering paper

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Abstract

Purpose of this paper (Could you please put your information in this box, answering the following question): What are the reason(s) for writing the paper or the aims of the research? Please take into consideration the fact the full text of an abstract should contain no more than 1000-2000 characters (including spaces).

Design/methodology/approach (Please leave in the title a suitable word); (Could you please put your information in this box, answering the following questions): How are the objectives achieved? Please include the main method(s) used for the research. What is the approach to the topic and what is the theoretical or subject scope of the paper?

Findings (Could you please put your information in this box, answering the following questions): What was found in the course of the work? This will refer to analysis, discussion, or results. What is/are the main conclusion(s)?

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Keywords: In addition could you please provide up to five keywords which encapsulate the principal topics of the paper (according to the classification being in force so far). First two keywords must be selected from the chosen set of the further part of that instruction called “Scope”, however the first keyword must be the title of the scope section which was chosen for your paper and the second one must be selected from the detailed keywords given in a given section of scope.

Reference to this paper should be given in the following way:

T. Liptáková, M. Lovíšek, B. Hadzima, S. Dundeková, Material parameters affecting degradation processes of Al-brasses in pipe systems, Archives of Materials Science and Engineering 76/1 (2015) 27-34 (the example)

1. Introduction

The paper should begin with the introduction in which the state-of-the-art of the issue concerning the paper will be presented generally and concisely. It is necessary to quote references taking into consideration the remarks included in the section "References". It is necessary to present the

aim of works included in the paper and clearly emphasise the originality of solutions and content-related approach to the issue worked out and described by Authors. Exemplary section headings and range of the subsequent sections of the paper are given roughly which we wish you to adopt during the preparation of your paper.

Table 1.

Editorial requirements

No	Item	Explanation
1.	Paper size	Please use non-standard format (205 x 280 mm) without page numbering. Only this paper size will be accepted.
2.	Length	Short paper must have 4 pages and exceptionally only after the previous agreement with the Editor can have 3 pages. Research and technical papers must have minimum 6 pages (only after the previous agreement with the Editor), however, it is advised that they have 8 pages, they can have 10 pages or more (only after the previous agreement with the Editor).
3.	Margins/Columns	Total text width: 17.7 cm; Pages: Maximum length: 21.8 cm; top margin 3.0 cm; bottom margin: 3.2 cm; left and right margins 1.4 cm; Columns: each column 8.45 cm wide with 0.8 cm middle margin do not begin a new section directly at the bottom of a page, but transfer the heading to the top of the next column; you may exceed the length of the text area by one line only in order to complete a section of text or paragraph.
4.	Page layout	The main body of the text should be left and right justified. Please remember about the 'fine-tuning': Do not end the page with a heading; do not start a page with an incomplete line; do not underline any part of the text.
5.	Fonts and line spacing	The 10 pt Times New Roman font in 1.05 line spacing is required
6.	Title	The title should have no more than 10 words (articles are not counted) and situated in two lines and left-justified Title of the paper (26 point, bold, Times New Roman), Authors' initial and surname^a (11 point, bold, Times New Roman) and the name of ^a Department, University, address City, Country, (each 10 point, Times New Roman). The title of the paper should not contain abbreviations (even common), and mark materials should be compatible with EN system.
7.	Abstract	Please provide a structured abstract (10 points), set out under 5-6 sub-headings: Purpose; Design/ Methodology/Approach; Findings; Research limitations/implications or/and Practical implications; and, Originality/value of paper . The words purpose, design and next sub-headings should be written in a bold style (10 points, please do not cancel them), and the abstract itself <u>should contain no more than 1000-2000 characters (including spaces)</u> . Please write concisely and clearly. The abstract should reflect only what appears in the original paper. The word Abstract should written in the bold style (14 point).
8.	Keywords	The words Keywords (10 points, each beginning with a big letter and separated by semicolon)
9.	Style	Section headings (13 points, bold, Times New Roman), subsection headings (11 points, bold, Times New Roman) should be left justified. Before section headings use two blank spaces and before subsection headings use one blank spaces. Please avoid creating very short subsections. The subsection should be not shorter than 0.5 column. The creation of sub-subsections is not foreseen. Table and figure headings (10 points) should be numbered consecutively and centre-justified.
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2. Description of the approach, work methodology, materials for research, assumptions, experiments etc.

In this section it is necessary to present in details assumptions and course of own researches to such an extent that a reader could repeat those works if he was going to confirm achieved results. In short papers those

information should be given in as short a version as possible.

2.1. Title

The paper title should precise clearly and in details its subject matter and should have no more than 10 words (articles are not counted). If a given paper has been published in a short version so far (eg in proceedings of any scientific conference), it is possible to publish it in a full version under condition that the title will be slightly changed and its contents will be significantly broadened, and in the references the citation of the short paper will be mentioned. In such a case it is necessary to submit a paper in a full version in the on-line registration system, however, in the header for the Editorial Board on the first page it is necessary to write "research or technical paper in a full version" and suitably change title of that paper in the comparison to its short version. Then none of fragments of a text and an abstract of a short paper can be repeated in a research or technical paper in a full version. The Author is fully legal and ethical responsibility in the event of disclosure of plagiarism in that case.

2.2. Format

The paper should be prepared according to the requirements provided in Table 1. Please pay attention to the fact that the subsection should be not shorter than 0.5 column.

2.3. Tables

Tables should be presented in the form shown in Table 1. They should be arranged throughout the text **but do not put the table at the first page**, preferably being included on the same page as they are first discussed. They should have a self-contained caption and be positioned in flush-left alignment with the text margin within the column. If they do not fit into one column they may be placed across both columns in which case place them at the top or at the bottom of a page.

2.4. Figures

Figures should be presented as in Figure 1. They should be clearly displayed by leaving at last single line of spacing above and below them.

When placing a figure at the top of the page, the top of figure should be at the same level as the bottom of the first text line. All notations and lettering should be no less than

2.5 mm high. The use of heavy black and/or colour bold lettering should be avoided as they will look unpleasantly dark when printed. They also must be located close to the first reference to them in the text and numbered consecutively. A figure caption should be placed immediately below the figures. Photographs and figures should be prepared in colour at min. 300 dpi resolution. Please do not use patterns in vector graphics. It is required to prepare them in Corel Draw in TIFF or JPEG format (prepared in MS Word are not accepted). Please remember that they cannot be reduced or enlarged after placement in MS Word application, because they lose the image quality.

Tables and figures placed across both columns should begin and end the page.

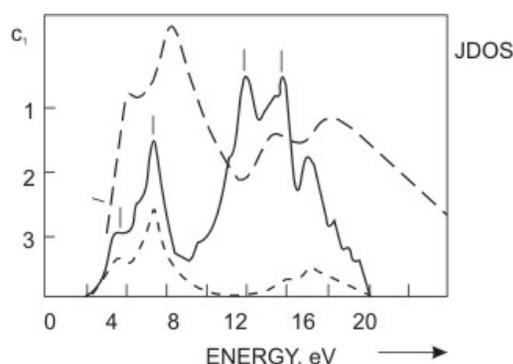


Fig. 1. Good quality figure with clear lettering

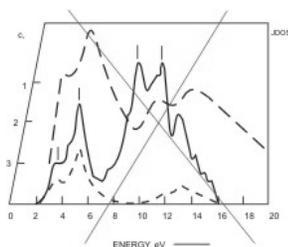


Fig. 2. Bad quality, distorted figure; lettering is too small

2.5. Equations

Equations should be placed flush-left with the text margin of the column and should be preceded and followed by one blank line.

$$S(t) = \lambda \cdot d^3 - \sum_{i=1}^f s_i \quad (1)$$

If they are numbered make sure that they are numbered consequently. Put the numbers in parentheses flush with the right-hand margin level with the last line of the equation.

3. Description of achieved results of own researches

3.1. General remarks

In that section it is necessary to present achieved results of own researches in details e.g. researches or calculations illustrating them in details and legibly by pictures, diagrams, photos e.g. metallographical ones, results, calculations, tables etc. and giving in details casual and result relations between stated facts confirming or excluding data known from the literature. That section should have a character of a scientific discussion, although in order to do that the separate section can be created and in the given one only the information about achieved results of researches can be included. The reports including the research results only are not expected, if they do not contain elements of in-depth scientific discussion. In short papers you should rather limit yourself to a discussion.

3.2. Scope

Thematic scope of papers is given below:

MATERIALS:

Metallic Alloys, Tool Materials, Superplastic Materials, Ceramics and Glasses, Composites, Amorphous Materials, Nanomaterials, Biomaterials, Multifunctional Materials, Smart Materials, Engineering Polymers

PROPERTIES:

Ductility, Crack Resistance, Fatigue, Creep-resistance, Fracture Mechanics, Mechanical Properties, Electrical Properties, and Magnetic Properties, Corrosion, Erosion, Wear Resistance, Non-Destructive Testing, Reliability Assessment, Toxicity, Working Properties of Materials and Products

METHODOLOGY OF RESEARCH, ANALYSIS AND MODELLING:

Electron Microscopy, X-ray Phase Analysis, Metallography, Quantitative Metallography, Image Analysis, Computer Assistance in the Engineering Tasks and Scientific Research, Numerical Techniques, Statistic Methods, Residual Life Analysis, Process Systems Design, Mould Flow Analysis, Rapid Prototyping, CAM, CAMS, CAQ, Engineering Design, Technological Design, Materials Design, Computational Material Science, Materials and Engineering Databases, Expert Systems, Artificial Intelligence Methods

MATERIALS MANUFACTURING AND PROCESSING:

Casting, Powder Metallurgy, Welding, Sintering, Heat Treatment, Thermo-Chemical Treatment, Thin & Thick Coatings, Surface Treatment, Machining, Plastic Forming, Quality Assessment, Automation Engineering Processes, Robotics, Mechatronics, Technological Devices and Equipment, Theoretical Fundamentals of Cleaner Production, Industrial Application of Cleaner Production Methods, Production and Operations Management, Production Planning and Control, Manufacturing Technology Management, Quality Management, Environmental Management, Safety and Health Management, Project Management, Physical Distribution and Logistics Management, Supply Chain Management, Productivity and Performance Management

EDUCATION AND RESEARCH TRENDS IN MATERIALS SCIENCE AND ENGINEERING:

Development of New Curricula for BSc, MSc and PhD Studies, Challenges of the Widening Labour Market, Complementary Roles of Developed and Developing Nations in Promoting a Global Industrial and Economical Infrastructure and Requirements on Common International Research and Teaching Development, Computer Aided Teaching, E-learning

4. Conclusions

It is necessary to present clearly the main conclusions from the whole paper. It is required to present them in a few points after the general conclusion. The Author's achievements and originality of research and the Authors' input in the undertaken subject matter and value of study should be emphasised. Practical application and possible directions of further works can be pointed out.

Acknowledgements

Acknowledgements should be placed before reference.

Additional information

Here information concerning eg. the presentation of the paper during any scientific conference can be given or the financial support resources.

References

[1] L.J. Taylor, *Materials Processing*. Second Edition, Backmann Verlag, Berlin – Paris – Warsaw, 2006.

- [2] P. Wang, W.L. Stanley, *Tissue Engineering*, in: A.F. Laurens (ed.), *The Scaffolds*, CRC Press Taylor & Francis Group, Boca Raton, 2007, 33-62.
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- [4] L.A. Dobrzański, E. Hajduczek, J. Marciniak, R. Nowosielski, *Physical metallurgy and heat treatment of tool materials*, WNT, Warsaw, 2006 (in Polish).
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References should be collected at the end of your paper. Please do not begin them on a new page unless this is absolutely necessary. They should be listed in the order in which they are cited in the text. Citation of reference should be made within square brackets. Please write full titles of Journals and papers according to examples.

The list of references should include at least 20 positions mainly in English. However, if they are not written in English their titles should be written in English transliteration, and in the bracket it is necessary to give a language of the original eg. (in Polish). About 15% of the cited works should include the ones published in the previous Issues of this Journal. One should not cite more than 15% of papers of his/her own authorship or co-authorship. It is necessary to pay attention that among literature references the positions from the year of the publication and from the year before the publication should be mentioned (no less than 20%).

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