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INSTRUCTIONS FOR FORMATTING THE PROCEEDINGS PAPERS OF THE XXIII COBEM

First Author's Name
Second Author's Name
Institution and address for first and second authors - if the same
e-mails

Third Author's Name
Institution and address for third author
e-mail

Same format for others authors, if any

Abstract. *The purpose of these instructions is to serve as a guide for formatting papers to be published in the Proceedings of the XXIII COBEM. The abstract should describe the objectives, the methodology and the main conclusions of the paper in about 200 words. It should not contain neither formulae nor reference to bibliography. The abstract will be included in a printed volume to be distributed to the symposium participants, whilst the full paper will be published in the proceedings*

Keywords: *keyword 1, keyword 2, keyword 3... (up to 5 keywords)*

1. INTRODUCTION

The proceedings of the XXIII COBEM will be published in Adobe^{TM} PDF format.

The papers must be formatted strictly according to these instructions. The present file can be used as a template for LaTeX users. Also, it should be used as a formatting guide to users of other text processing software.

The papers are limited to a maximum of 8 pages, including tables and figures. The final PDF file must not exceed 5.0 Mb.

2. TEXT FORMAT

The manuscripts should be written in English, typed in A4 size pages, using font Times New Roman, size 10, except for the title, authors affiliation, abstract and keywords, for which particular formatting instructions are indicated above. Single space between lines is to be used throughout the text.

The text block that contains the title, the authors' names and affiliation, the abstract and the keywords must be indented 0.1 cm from the left margin and marked by a leftmost black line border of width 2 1/4 pt.

The first page must have a top margin of 3 cm and all the other margins (left, right and bottom) must have 2 cm. All the other pages must be set with all margins equal to 2 cm.

PAGES **SHOULD NOT** BE NUMBERED

The body of the text must be justified. The first line of each paragraph must be indented by 0.5 cm. Sufficient information must be provided directly in the text, or by reference to widely available published work. Footnotes should be avoided.

All the symbols and notation must be defined in the text. Physical quantities must be expressed in the SI (metric) units. Mathematical symbols appearing in the text must be typed in italic style.

Bibliographic references should be cited in the text by giving the last name of the author(s) and the year of publication, according to the following examples: "In a recent work (Vajjha and Das, 2009)..." or "Recently, Vajjha and Das (2009)...". In the case of three or more authors, the form "(Panaras *et al.*, 2010)" should be used. Two or more references having the same authors and publication year must be distinguished by appending "a", "b", etc., to the year of publication. For exemple: "In papers (Simonson and Besant, 1999a) and (Simonson and Besant, 1999b)...".

Acceptable references include journal articles (Özişik and Murray, 1974), numbered papers, dissertations and theses (Charoensupaya, 1986; Aparecido, 1988), published conference proceedings (Tuckerman and Pease, 2011), preprints from conferences, books (Mikhailov and Özişik, 1984) and submitted articles (if the journal is identified).

References should be listed at the end of the paper according to instructions provided in Section 4.

2.1 Section titles and subtitles

The section titles and subtitles must be aligned at left, typed with Times New Roman, size 10, bold style font. They must be numbered using Arabic numerals separated by points. No more than 3 sublevels should be used. One single line must be included above and bellow each section title/subtitle.

2.2 Mathematical equations

The mathematical equations must be indented by 0.5 cm from the left margin. They must be typed using Times New Roman, italic, size 10 pt. font. Arabic numerals must be used as equation numbers, enclosed between parentheses, right-aligned, as shown in the examples below. Equations should be referred to either as "Eq. (1)" in the middle of a phrase or as "Equation (1)" in the beginning of a sentence. Matrix and vector quantities can be indicated either by brackets and braces, as in Eq. (1), or in bold style, as in Eq. (2). Symbols used in the equations must be defined immediately before or after their first appearance.

One single line must be included above and bellow each equation.

$$[M]\{\ddot{x}\} + [C]\{\dot{x}(t)\} + [K]\{x(t)\} = f(t) \tag{1}$$

$$\mathbf{M}\ddot{\mathbf{x}}(t) + \mathbf{C}\dot{\mathbf{x}}(t) + \mathbf{K}\mathbf{x}(t) = \mathbf{f}(t) \tag{2}$$

2.3 Figures and tables

Figures and tables should be placed in the text as close as possible to the point they are first mentioned and must be numbered consecutively in arabic numerals. Figures must be referred to either as "Fig. 1" in the middle of a phrase or as "Figure 1" in the beginning of a sentence. The figures themselves as well as their captions must be centered in the breadth-wise direction. The captions of the figures should not be longer than 3 lines.

The legend for the data symbols as well as the labels for each curve should be included into the figure. Lettering should be large enough for ease reading. All units must be expressed in the S.I. (metric) system.

One blank line must be left before and after each figure.

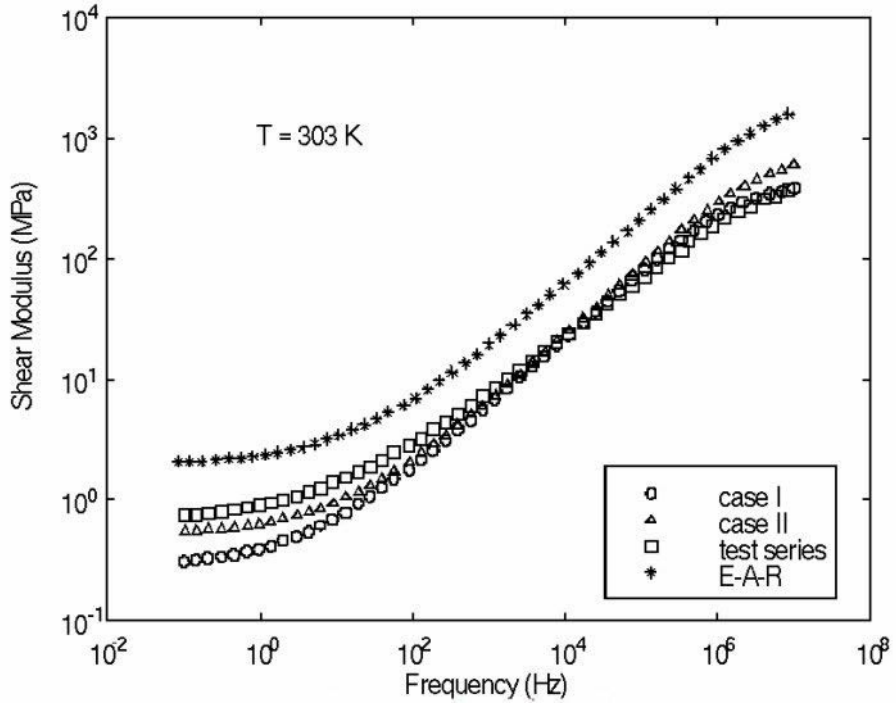

Figure 1. Diagram of shear modulus versus frequency at 303 K

Color figures and high quality photographs can be included in the paper. To reduce the file size and preserve the graphic resolution, figures must be saved into GIF (figures with less than 16 colors) or JPEG (for higher color density) files before being inserted in the manuscript.

Tables must be referred to either as "Tab. 1" in the middle of a phrase or as "Table 1" in the beginning of a sentence. The tables themselves as well as their titles must be centered in the breadth-wise direction. The titles of the tables should

not be longer than 3 lines. The font style and size used in the tables must be similar (both in size and style) to those used in the text body. Units must be expressed in the S.I. (metric) system. Explanations, if any, should be given at the foot of the tables, not within the tables themselves.

One blank line must be left before and after each table.

The style of table borders is left free. An example is given in Tab. 1.

Table 1. Experimental results for flexural properties of CFRC-4HS and CFRC-TWILL composites. Span/depth ratio = 35:1. Average results of 7 specimens.

Composite Properties	CFRC-TWILL	CFRC-4HS
Flexural Strength (MPa)$^{(1)}$	209$\pm$ 10	180 $\pm$ 15
Flexural Modulus (GPa)$^{(1)}$	57.0 $\pm$ 2.8	18.0 $\pm$ 1.3
Mid-span deflection at the failure stress (mm)	2.15 $\pm$ 1.90	6.40 $\pm$ 0.25

$^{(1)}$ measured at 25^{o}C

3. ACKNOWLEDGEMENTS

This optional section must be placed before the list of references.

4. REFERENCES

The list of references must be introduced as a new section, located at the end of the paper. The first line of each reference must be aligned at left. All the other lines must be indented by 0.5 cm from the left margin. All references included in the reference list must have been mentioned in the text.

References must be listed in alphabetical order, according to the last name of the first author. See the following examples:

Aparecido, J.B., 1988. *Transformada Integral Generalizada no Escoamento Laminar e Transferência de Calor em Dutos Retilíneos de Geometria Arbitrária*. Ph.D. thesis, Instituto Tecnológico de Aeronáutica, São José dos Campos, SP, Brazil.

Charoensupaya, D., 1986. *Experimental and Analytical Investigations of Composite Desiccant Structures and Low Humidity Adsorption*. Ph.D. thesis, Illinois Institute of Technology, Chicago, IL, USA.

Mikhailov, M.D. and Özişik, M.N., 1984. *Unified Analysis and Solutions of Heat and Mass Diffusion*. John Wiley & Sons, New York.

Özişik, M.N. and Murray, R.L., 1974. "On the solution of linear diffusion problems with variable boundary condition parameters". *Journal of Heat Transfer (ASME)*, Vol. 96, pp. 48–51.

Panaras, G., Mathioulakis, E., Belessiotis, V. and Kyriakis, N., 2010. "Experimental validation of a simplified approach for a desiccant wheel model". *Energy and Buildings*, Vol. 42, No. 10, pp. 1719–1725.

Simonson, C.J. and Besant, R.W., 1999a. "Energy wheel effectiveness – part I: Development of dimensionless groups". *International Journal of Heat and Mass Transfer*, Vol. 42, pp. 2161–2170.

Simonson, C.J. and Besant, R.W., 1999b. "Energy wheel effectiveness – part II: Correlations". *International Journal of Heat and Mass Transfer*, Vol. 42, pp. 2171–2185.

Tuckerman, D.B. and Pease, R.F.W., 2011. "Microchannel heat transfer: early history, commercial applications, and emerging opportunities". In *Proceedings of the ASME 2011 9th International Conference on Nanochannels, Microchannels, and Minichannels*. Edmonton, Alberta, Canada. Paper no. 58308.

Vajjha, R.S. and Das, D.K., 2009. "Experimental determination of thermal conductivity of three nanofluids and development of new correlations". *International Journal of Heat and Mass Transfer*, Vol. 52, No. 21-22, pp. 4675–4682.

5. RESPONSIBILITY NOTICE

The following text, properly adapted to the number of authors, must be included in the last section of the paper:
The author(s) is (are) the only responsible for the printed material included in this paper.