

## TURBOMACHINERY LABORATORY WRITING STYLE AND STANDARDS

Updated 27, November, 2018

*Correspondence about your paper will be funneled through the contact author only. This is usually the person who submits the paper or the first author listed. If you would like to change the contact author, please notify Ashton Drollinger (information below). It will be up to the contact author to see that all coauthors receive copies of all correspondence. Please follow these instructions or make certain that they are passed on to whoever actually prepares the paper for submission.*

### PREPARING THE PAPER

A Turbomachinery Laboratory template is provided on our website for Lectures and Tutorials. Please contact Ashton Drollinger if you need help applying your paper to the template. Reach out to your monitor for guidance in preparing the manuscript for submission. It is customary for the monitor and their team to perform an initial review for the purpose of providing constructive criticism such that the submission has the best chance of acceptance. Therefore, a complete draft should be provided to the monitor for their review and feedback well in advance of the manuscript submission date.

The written manuscript must be a technical report, not an outline or written form of the verbal presentation.

- Use active, not passive, voice.
- Avoid first person or personal pronouns (we, our, etc.).
- The entire document and visual aids must be free of commercialism, including artwork. **LOGOS CANNOT BE PRESENT** anywhere in the manuscript. In addition, logos cannot be present after the first slide of your presentation.
- One author must submit the manuscript in final form with Figures and Tables embedded in the paper itself.
- Manuscripts must be submitted electronically as a pdf file.

### ORGANIZATION

See [this paper](#) for an example of solid organizational structure. Ask your monitor if you have questions about how to organize your paper. Please include:

- Title
- Authors
- Author Photo/s and Narrative Biography (optional – limited length)
- Abstract (300-word flexible maximum)
- Introduction
- Main Text, including Figures and Tables, which should appear in-text
- Conclusion
- Nomenclature (optional but encouraged)
- Appendix (optional)
- References (if other work is cited)
- Bibliography (optional)
- Acknowledgement (optional)

#### *Title*

The title should be 10 point font, bold, all capitals, and no more than two lines in length.

#### *Author Photo/s and Narrative Biography*



*Author photo/s and narrative biography are optional. These are limited in length to fit onto the first page. Often, only the first three (3) authors are given biographies. Biographies should be no more than 150 words per author. The photograph is 0.8 inch wide by 1.0 inch tall. The narrative biography is a 10 point italicized font. The number of biographies can be more than three (3) provided that they fit onto the first page.*

### ***Abstract***

The abstract at the beginning of the final paper should *not* be the same abstract submitted in response to the call for papers. The published abstract should be brief, providing a synopsis of the final paper. It should contain no product names, no explanatory terms—just narrative. These abstracts will also appear on our website.

### ***Introduction***

The introduction should lead into the paper by

1. defining the problem and
2. stating the proposed method of solution.

The use of company names and company products should be limited to this introductory section and only with the consent of the company whose name or product is mentioned; thereafter they must be referred to generically. Avoid commercialism. Permission to use company names or product names for the author companies is granted by the authors when submitting the permission to publish form. Please be aware of proper use of registered trademarks when referring to company product names.

### ***Main Text***

The main text is 10 point font with block paragraph formatting. Paragraphs are not indented. Paragraphs are separated by an additional line space between each paragraph.

Headings: Give a heading for each important section of the paper to help organize and improve the visual appearance of the paper in print. Do not write or refer to different sections as chapters. Do not use Roman numerals. With the exception of the first paragraphs of the paper that include the narrative biographies of the authors, all sections should have a heading.

## **MAIN HEADINGS**

Main headings are 10 point font, bold and capitalized with two lines of space above and one line of space below.

### ***Second Level Headings***

Second level headings are 10 point font, bold and italicized with one line of space above and no additional lines of space below.

### ***Third Level Headings***

Third level headings are 10 point font and italicized with one line of space above and no additional lines of space below.

### ***Fourth Level Headings***

Fourth level headings are 10 point font, italicized, and indented one ¼ inch tab with one line of space above and no additional lines of space below.

### ***Bullets***

- Always capitalize the first letter of the first word after a bullet.
- Use bullets instead of numbered or lettered statements whenever possible.
  - Open bullets are used for subcategories under large bullets.
  - Use periods after bullet statements *only* if the statement completes a sentence or is a complete sentence.
  - No periods after partial sentences
- The first level of bullets will be indented one ¼ inch tab.
  - The second level of bullets will be indented ¾ inch.

### ***Equations***

Capitalize the word “Equation” in the sentence and place the number in parentheses. Symbols should be clearly defined immediately after the equation in which they appear or alternatively in the nomenclature section. Number equations consecutively in parenthesis right justified after the equation. Cite the equation in text by number. The actual equation should be centered horizontally. The equation line should have 6 points space above and 6 points space below. All symbols should be explained either in the text or in the Nomenclature section. The actual equation is a 10 point Cambria Math Font in Microsoft Equation Editor.

*Example:* “...in Equation (1).”

$$\vec{F} = \frac{m \cdot \vec{a}}{g_c} \quad (1)$$

Where;

$\vec{F}$  = force vector,  $lb_f$  (N)

$m$  = mass,  $lb_m$  (kg)

$\vec{a}$  = acceleration vector,  $in/s^2$  ( $m/s^2$ )

$g_c$  = gravitational conversion factor,  $386.09 \cdot \frac{lb_m \cdot in}{lb_f \cdot s^2} \left( 1 \cdot \frac{kg \cdot m}{N \cdot s^2} \right)$

### Figures

Figures must be of a size and scale to provide legibility. Axes must be properly labeled and dimensioned. The use of normalization to protect information from disclosure is discouraged. However, to the extent that it must be used, additional normalization should be limited to the dependent variable only, which is typically shown on the Y-Axis.

### Figure and Table Captions

All figures and tables *must be cited* in the text, numbered consecutively as they appear, and placed as closely as possible after the paragraph in which they are cited. All figures and tables must have captions. Captions are always placed below figures and above tables and are to be kept as brief as possible. Captions are capitalized in the same way a title is capitalized: articles, prepositions, and conjunctions are in lowercase.

*Example:* Figure 1. Diagram of a Compressor.

**YOU MUST CITE THE SOURCE OF EACH FIGURE.** If a figure is presented without citation, it is reasonable for the reader to assume the figure was created by the author. If the author has taken the figure from another source, the source **must be cited in the figure caption.**

*Example:* Figure 1. Diagram of a Compressor (Courtesy of XYZ Corporation)

### Measurements / Units

All measurements/units must be in United States Customary Units (USC) *and* SI (Metric) Units in the text.

If you are presenting at a Symposium in Houston, please list U.S. Units first with SI in parenthesis, e.g. lbf (N)

If you are presenting at a Symposium outside of the United States, please list SI/Metric Units first with USC 2<sup>nd</sup> in parenthesis, e. g. N (lbf)

SI Unit abbreviations should follow “Thompson, A. and Taylor, B. N., 2008, Guide for the Use of the International System of Units (SI), NIST Special Publication 811.” No official definition of USC abbreviations exist. However some follow “The Chicago Manual of Style, 17<sup>th</sup> Edition, The University of Chicago Press.”

### Conclusion

The conclusion should complete the paper by providing a summary and lessons learned.

### Nomenclature

The nomenclature section can be used to define terms and variables that are used within the paper.

### References

In the Main Text, cite references by giving the last name of the author and the year of publication of the reference. Enclose the year of publication in parentheses; whether or not the author's name should be enclosed within the parentheses depends on the context. *References should be listed alphabetically.*

*Examples:* Jones (1964) developed an alternative model *or*  
An alternative model (Jones 1964) was developed.

If there are two authors, include both last names in the citation separated by “and.”

*Example:* Jones and Smith (1972) explored...

If there are more than two authors, include the last name of the first author followed by “et al.”

*Example:* -Jones, et al. (1973), believed...

If there are two or more references with the same author and the same year of publication, distinguish the references in the text by adding a lowercase letter (“a” to the first citation, “b” to the second citation, etc.).

*Example:* Jones (1985a) felt that... *and* The theory Jones (1985b) had...

The list of References must be complete.

- Format for books: Author, year of publication, Title of Book, City, State/Country of publication: Name of Publisher.
- Format for articles: Author, year of publication, “Title of Article,” Title of Book or Journal in which article appears, issue number, page number.
- References should be listed alphabetically.
- Use up to two initials (if given), not first names, in author’s name. Put a space between the two initials.
- Use commas between names in a series of three or more but just an “and” between two names.
- Date is directly after author’s name.
- Put a period at the end of the reference.

*Examples:*

API 682, 1994, “Shaft Sealing Systems for Centrifugal and Rotary Pumps,” First Edition, American Petroleum Institute, Washington, D.C.

Dufour, J. W. and Nelson, W. E., 1980, “Maintenance of Small Steam Turbines,” *Sawyer’s Turbomachinery Maintenance Handbook 2*, Turbomachinery International Publications.

Hoppock, W. G., Silvaggio, J. A., and Van Bramer, K. G., 1982, “Abradable Seals in Turbomachinery,” *Proceedings of the Eleventh Turbomachinery Symposium*, Turbomachinery Laboratory, Texas A&M University, College Station, Texas, pp. 61-68.

Lobanoff, V. S. and Ross, R. R., 1985, *Centrifugal Pumps: Design and Application*, Houston, Texas: Gulf Publishing Company.

Lupfer, D. E., Johnson, M. L., and Smith, D. R., 1980, “Analog Computer Controls Cuts Distillation Costs,” *Instrument Society of America Journal*, 13, pp. 55-58.

Piotrowski, J. D., June 1984, “How Varying Degrees of Misalignment Affect Rotating Machinery: A Case Study,” *Machinery Vibration Monitoring and Analysis Meeting*, Claredon Hills, Illinois, pp. 15-22.

### ***Punctuation and Symbols***

**Degrees:** Use the degree symbol in temperature measurements. Use the word when referring to angles.

*Examples:* The inlet temperature was 200°F (93°C).  
The lines met in a 90 degree angle.

**Hyphens:** Use a hyphen when a first word modifies a second word in forming a compound adjective (well-known man, full-time employee). However, most words are not hyphenated. Avoid using hyphens after prefixes unless the hyphen is needed because the resulting word otherwise has a different meaning.

**Numbers:** In text, spell out the numbers one through nine, and use numerals for 10 and above. In the case of unitized amounts, use numerals.

*Examples:* three blades, 37 blades, nine iterations, 10 iterations, 5 percent, 15 percent, .035 inch, 9 Hz, 125 Hz.

**Percent:** Always spell out the word percent. Use the symbol only in an equation or table.

**Periods:** Leave only one space after periods between sentences.

**Abbreviations:** Do not use periods within or after abbreviations; e.g. ASME, ft, gpm, rpm

Preferred Spelling:

data (plural), datum (singular)  
barrel-type compressor  
O-ring  
off-design  
state-of-the-art  
ten-hour (as an adjective)

*(Words listed below are one word)*  
flowrate  
rotordynamics  
troubleshooting  
turboexpander  
Turbomachinery

Size of Artwork: Figures and tables are to be embedded in the document. They are to be sufficiently sized for legibility.

Numbering Artwork: Number all artwork in consecutive order by category (i.e., Figures or Tables). Even if a paper is written in several sections, there can be only one "Figure 1" in the paper. Do not submit multiple figures, such as Figure 3a, Figure 3b, ... Figure 3f.

Labeling Artwork: Label illustrations, graphs, photographs, etc., as Figures. Label tables as Tables.

*For more information or for questions not covered in this Style Guide, contact*

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<http://turbolab.tamu.edu>