



STYLE GUIDELINES AND SPECIFICATIONS

GENERAL TEXT

- Headings and subheadings should appear throughout the paper to divide the subject matter into logical parts and to emphasize the major elements and considerations. Parts or sections may be numbered, if desired, but paragraphs should not be numbered. There should be no more than three levels of headings. They need not be numbered but can be. Numbering follows the pattern: Chapter 1, 1.1, 1.1.1.
- All long headings should be broken for sense
- Text heads should follow hierarchy of content
- Numbered lists should be used for enumerations
- General lists should be bulleted
- Footnotes are for necessary but tangential information that if included within the main text would be disruptive. Footnotes are not for references.
- Front matter order should be as follows:
 - Half-title page/blank or series page (as applicable, not mandatory)
 - Title page/copyright page
 - Dedication/blank
 - Table of contents
 - Preface or foreword/blank
 - Editor's note (or Translator's note)/blank
 - Acknowledgments/blank
- Back matter consists of the following:
 - References/bibliography (see section on references at end)
 - Appendices
 - About the author
 - Index
- Examples, sidebars, problems, etc., should be readily identified and handled to be visually unique (different font, narrower type area, box, rules, etc.)
- Quotes of more than five (5) lines should be set off, not run in with text and surrounded by "/"
- In-text tables can be used with discretion

- Definitions. If text includes a glossary, italicize first use of term (or at author's discretion)
- Data is singular

PUNCTUATION

- Use of serial comma
- Conjunctions set off by commas (therefore, indeed, however, etc.)
- No end punctuation before or after display math
- Quotation marks inside colons and semi-colons, outside periods and commas
- Always use double quotation marks; single quotation marks are only used inside double quotation marks.
- Punctuation that applies to quotation is inside the quotation marks. If they apply to whole statement, punctuation placed outside marks.
- 1/N dashes used to show range in tabular or figures only, not used in text
- No end punctuation in short bulleted lists
- No end punctuation in short numbered lists
- Colon introduces lists when items not complete sentences
- Colon introduces lists when items are complete sentences/thoughts and when introducing text is full sentence
- "e.g.," "etc.," and "i.e." set off by commas
- "et al" with no period unless at sentence end
- Use of comma with all clauses introduced by "which"
- Use of comma with "respectively"
- Compound adverbs not hyphenated
- Commonly used compound adjectives not hyphenated
- 1/M dashes have space on either side
- Use slash (/) with numbers (25 mL/h) but use "per" when obvious verb included
- Hyphenation of compound adjectives: use with "anti-," "semi-," "non-," "pre-/post-," "high-/low-." Examples: anti-gravity, semi-elliptical, non-nuclear, pre-conference, post-emission, high-tensile strength, low-temperature material.
- Two words versus closed up:

Noun	Verb	Compound
Adjective/Noun		
backup	back up	back-up singer

startup	start up	start-up procedure
breakdown	break down	breakdown lane
breakoff	break off	
breakup	break up	
buildup	build up	built-up area
burnup	burn up	
cutoff	cutoff	cut-off date
makeup	makeup	makeup work
setup	set up	setup committee
shutdown	shut down	shutdown valve
takeoff	take off	takeoff plans

CAPITALIZATION/SPELLING

- Always use American spelling
- No middle "e" in acknowledgment or judgment.
- Use of initial cap/lowercase for prepositions and conjunctions of four or more letters in headings and titles.
- If conjunctions/prepositions of less than four letters begin sentence or heading, make initial cap/lowercase.

NUMBERS

- No comma in 4-digit numbers in text. OK to use in table to align items in column.
- Spell out numbers 1 to 10. Above that, use numerals.
- Always use numerals with a unit of measure; space between number and measure (1 in. not 1in.)
- Use zero before decimal point (e.g., 0.02).
- Decades written as 1940s.
- Use ordinal numbers for 1 through 10 (first through tenth). Above that use numeral and "th"/"st" etc.
- Use hyphen in text for fractions (two-thirds, one-half, etc.).
- Always spell out numbers when they begin sentence.
- Numbers with units of measure in a range, repeat abbreviation: 20% to 50%, 5 in. to 10 in., etc.
- All fractions should be case ($\frac{2}{3}$, not 2/3; $2\frac{2}{3}$, not 2-2/3).

ABBREVIATIONS (See list of abbreviations at end of guide.)

- In text do not abbreviate units of time (seconds, minutes, hours, days, weeks, years). OK to abbreviate in tabular or figures (sec, min, hr, days, wk, yr).
- Always use "%" with numeral: 5%, 5% to 7%, 3% and 7% (no dashes in percentage ranges unless in tabular). Spell out percentage if appropriate. No space between number and "%" sign.
- Use degree symbol for Fahrenheit and Celsius, not with Kelvin or Rankine.
- Use "deg." for angles.
- Do not use "vs." in text; use "versus" (vs. OK in tables, figures).

MATH

- Variables cited in text italic; if with definition, separated by commas ("when t is . . ."; "where diameter, d , is unequal . . .").
- All display equations must be numbered.
- Some short and/or related equations can be set on the same line with a 2/M space in between them.
- Equations referred to in text as "Eq. (1-1)" or "Eqs. (1) and (4)" unless begins sentence (then "Equation" is spelled out). Equations can also be numbered by the chapter and order of appearance within the chapter, e.g., (12-1).
- Equation numbers are in parentheses and flush right. If equation has more than one line, equation number is set with last line.
- Italics for variables, bold for vectors, constants roman, Greek as Greek.
- Parentheses are used first, then brackets, then parentheses if necessary.
- Symbols indicating simple product are closed up (dx).
- Numerals and abbreviations for math functions are roman (sin, cos, log, exp, tan, etc.).
- All operational signs have space on either side, except \pm , which is closed up
- Space on either side of equals sign.
- All display equations are centered. If equation runs to more than one line, break before operational sign and

align operational sign on equal signs of first line of equation.

- The word "Equation" should be spelled out at the beginning of a sentence, but abbreviated Eq. elsewhere.

NOMENCLATURE

- Nomenclature that follows display math should be set off by "where" flush left on own line. No extra space to first definition.
- Variables being defined in nomenclature are italic and separated from definition by an equals sign.
- Definitions do not require "the" (e.g., "*d* = diameter of the xxxx" not "*d* = the diameter of the xxxx").
- Equal signs align, variables align flush right, definitions align flush left (runover is hang indent).
- No end punctuation in nomenclature.
- If unit of measure provided in definition, separate with comma (*d* = diameter of the xxxx, in.)

FIGURES

- All figures must be numbered and have a caption.
- Figures should be numbered by the chapter and order of appearance within the chapter, e.g., (Figure 12-1).
- Figures referred to in text as "as in Figure 1-1," "(See Figure 4-9.)," or ". . . (see Figure 11-6)."
- All figures should be referenced in the text and will be placed near where they are referenced.
- All figures should be proportionately sized.
- Callouts in sized figures should not be smaller than 6 pt.
- Any required credit statements or acknowledgments should be included as subcaptions.
- Figures can have general or numbered notes. If both, general precedes numbered.
- The word "Figure" at the beginning of a sentence should be spelled out, but abbreviated Fig. elsewhere.

TABLES

- All tables must be numbered and have a caption.
- Tables should be numbered by the chapter and order of appearance within the chapter, e.g., (Table 12-1).

- Tables referred to in text as "as in Table 1-1," "(See Table 4-1.)," or ". . . (see Table 10-7)."
- Tables should be placed in text as close to first reference as possible.
- All tables should be proportionately sized.
- Any required credit statements or acknowledgments should be included as subcaptions.
- Table can have general or numbered notes. If both, general precedes numbered.

REFERENCES

References are acknowledgments of other works used in the creation of another work. Within the text, references should be cited in numerical order according to their order of appearance. The numbered reference citation should be enclosed in brackets.

Example: It was shown by Prusa [1] that the width of the plume decreases under these conditions.

In the case of two citations, the numbers should be separated by a comma [1, 2]. In the case of more than two reference citations, the numbers should be separated by a dash [5-7].

References to original sources for cited material should be listed together at the end of the chapter or book; footnotes should not be used for this purpose. References should be arranged in numerical order according to their order of appearance within the text.

References to journal articles, papers in conference proceedings, or any other collection of works by numerous authors should include:

- last name of each author followed by their initials
- year of publication
- full title of the cited article
- full name of the publication in which it appeared
- volume number (if any) in boldface (**Do not include the abbreviation "Vol." within the reference.**)
- inclusive page numbers of the cited article

References to textbooks, monographs, theses, and technical reports should include:

- last name of each author followed by their initials

- year of publication
- full title of the publication (in italic or underlined)
- publisher
- city of publication
- inclusive page numbers of the work being cited

In all cases, the titles of books, periodicals, and conference proceedings should be underlined or in italics. A sample list of references follows. Note that there is a period at the end of "et al."

Sample References

[1] Kwon, O. K., and Pletcher, R. H., 1981, "Prediction of the Incompressible Flow Over a Rearward-Facing Step," *Technical Report HTL-26, CFD-4*, Iowa State Univ., Ames, IA.

[2] Lee, Y., Korpela, S. A., and Horne, R. N., 1982, "Structure of Multi-Cellular Natural Convection in a Tall Vertical Annulus," *Proceedings, 7th International Heat Transfer Conference*, U. Grigul et al., eds., Hemisphere Publishing Corp., Washington, D.C., Vol. 2, pp. 221-226.

[3] Sparrow, E. M., 1980a, "Fluid-to-Fluid Conjugate Heat Transfer for a Vertical Pipe – Internal Forced Convection and External Natural Convection," *ASME Journal of Heat Transfer*, **102**, pp. 402-407.

[4] Sparrow, E. M., 1980b, "Forced-Convection Heat Transfer in a Duct Having Spanwise-Periodic Rectangular Protuberances," *Numerical Heat Transfer*, **3**, pp. 149-167.

[5] Tung, C. Y., 1982, "Evaporative Heat Transfer in the Contact Line of a Mixture," Ph.D. thesis, Rensselaer Polytechnic Institute, Troy, NY.

[6] Amon, A., Jr., 1995, *Electronic Packaging*, John Wiley and Sons, New York.

Commonly Used Abbreviations

Alternating current	AC
ampere	A
British thermal unit	Btu
Celsius/Centigrade	°C

centimeter	cm
Charpy V-notch	C _v
Class	Cl.
cubic in.	in. ³
cubic meter	m ³
cubic millimeter	mm ³
cubic yard	cu yd
day	day
decibel	dB
degree angle	deg.
degree temperature	°
diameter	diam.
direct current	DC
Fahrenheit	°F
foot	ft
gallon	gal
hour	hour (hr or h in tables)
hertz	Hz
inch	in.
inside diameter	I.D.
joule	J
Kelvin	K
kilogram	kg
kilojoule	kj
kilopascal	kPa
kilopascal absolute	kPa (absolute)
kilopascal gage	kPa (gage)
kilovolt	kV
kilowatt	kW
kilowatt-hour	kW•h
kips per square inch	ksi
liter	L
maximum	max.
mega electron volt	meV
megapascal	Mpa
megavolt	MV
meter	m

micron	μm
mile	mi
miles per hour	mph
milliliter	mL
millimeter	mm
millivolt	mV
minimum	min.
minute	min
month	month
newton	N
newton meter	N•m
nominal bolt size	M
nominal pipe size	NPS
ounce	oz
outside diameter	O.D.
pascal	Pa
plus or minus	\pm
pound	lb
pounds per linear inch	lb/in.
pounds per square inch	psi
pounds per square inch gage	psig
radian	rad
root mean square	rms
revolutions per minute	rpm
revolutions per second	rps
Rankine	R
Reynolds	Re
second	sec
square inch	in.^2
square kilometer	km^2
square meter	m^2
square millimeter	mm^2
ton	ton
volt	V
watt	W
yard	yd
year	year

