Transactions of the Japan Society of Refrigerating and Air Conditioning Engineers, Received date: Month Day, Year; J-STAGE Advance published date: Month Day, Year doi: 10.11322/tjsrae.\$\$-\$\$

English Title of the Paper (Times New Roman 14pt Bold) -2nd Report: English Sub-Title—(Times New Roman 12pt Bold)

Taro YAMADA* Jiro KAWAKAMI** Saburo YAMAKAWA*† (Times New Roman 10.5pt)

- *Department of Mechanical Engineering, Faculty of Engineering, The University of Tokyo (7-3-1Hongo, Bunkyo-ku, Tokyo, 113-0033)
- **Institute of Environmental Studies, Graduate School of Frontier Science, The University of Tokyo (7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-0033)

Summary

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, references should be avoided. Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself. The abstract must not exceed 200 words. The use of Times New Roman 9 pt with 10pt between the lines is recommended. Before typing, indent with two characters spaces should be given.

For keywords, select 5 ~8 English words which express main theme and are easy to guess the content of the research paper. Select two keywords from vocabulary table provided from JSRAE at first, and put them on the beginning of those words. Use capital for the first letter of keyword. The letter size must be 10pt, take one blank line from Summary.

Keywords: Heat transfer, Thermal storage, Evaporation, Condensation, Refrigeration

1. Main Heading (centered) (11pt) (10pt, leave 1 line)

This template is for manuscript contributed to the Trans. JSRAE, using Microsoft Word. Manuscripts must be written in English typed in two columns fifty-eight lines per column on numbered pages of A4 or US letter size. Margins are 30mm from the top, 27mm from the bottom, 24mm from the right and left, and gap between columns is 12mm. All figures and tables should be included in the most appropriate locations within the main text, and not placed on separate pages. The slight difference in the number of lines is permitted.

Main headings will be Introduction, Nomenclature, Theory, Experimental, Results, Discussion, Conclusions, and References. Leave a blank line above and below each main heading. Main heading is typed with 11pt and centered.

In the main body of manuscript, use Times New Roman 10 pt. Use an indent of 2 spaces when starting new paragraph. Articles cited in the main body of manuscript should be indicated with number, for example, xxxxx¹,yyyyy²⁻⁴. Number of the cited articles are given in the order of their appearance.

(10pt, leave 1 line)
2. Sub Headings
(10pt, leave 1 line)

2.1 Heading of section

Left-aligned, typed in 10pt, leave a blank line above the heading.

2.1.1 Heading of term

Left-aligned, typed in 10pt, do not leave any blank lines above or below this level heading.

(a) Small headline Typed in 10pt, the text begins on the same line, keeping two character blanks.

3. Equations

Mathematical equations should be numbered serially such as (1), (2), (3). Cite as Eq. (1), Eqs. (3) - (5). Spell out "Equation" if at the beginning of a sentence.

$$e_{1} = \frac{P}{\rho_{1}} + \frac{u_{L}^{2}}{2} + gz \tag{1}$$

$$E = e_{\mathfrak{g}} W_{\mathfrak{g}} + e_{\mathfrak{L}} W_{\mathfrak{L}} \tag{2}$$

4. Figures and Tables

Each figure and table must have a caption. Numbers should be given as Fig.1, Fig.2, Table 1 (photos are included in figures). Cite as Fig.1, Figs. 1-3, or Table 1. If it appears at the beginning of a sentence, it should be indicated as Figure 1 or Figures 1-3 without abbreviation.

For titles of tables and figures, use 10pt, Times New Roman and use capital letter for only the initial letter of word. In addition, titles of tables and figures should be written after number of table (figures),

†Fax:+81 **-***-*** E-mail:Corresponding@****.**.jp

Paper presented at Conference Name, Month Day1-Day2, Year, City, Country



keeping one character blank.

Figures, Tables and photos should be enough clear to be printed and letters in the figures and tables are printed in larger than 9pt. For titles of abscissa and longitudinal axes of charts, use 10pt.

Photos should be used with enough sharpness.

Leave a blank line above and below each figure or table.

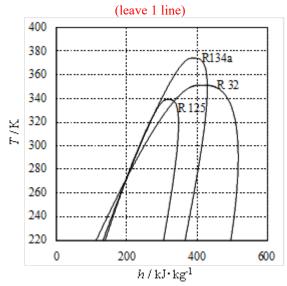


Fig.1 Temperature-enthalpy diagram of R 32, R 125 and R 134a.

(leave 1 line)

Table 2 Molar masses, standard boiling points and critical temperatures of the refrigerants

Refrigerant	M	$T_{ m b}$	T_{c}
	g•mol ⁻¹	K	K
R 10	153.822	349.88	556.36
R 11	137.367	296.89	471.16
R 12	120.913	243.364	384.98
R 13	104.459	193.21	301.87
R 14	88.004	145.11	227.61
R 20	119.377	334.28	536.36
R 21	102.922	282.1	451.56
R 22	86.468	232.34	369.3
R 23	70.014	191	299

(leave 1 line)

5. Unit and Nomenclature

The use of SI units is recommended. For example; k [W/(m K)] or $k \text{ [Wm}^{-1}\text{K}^{-1}]$, k = 0.58 W/(m K) or $k = 0.58 \text{ Wm}^{-1}\text{K}^{-1}$.

List symbols in alphabetical order with their definition and SI units. Greek letters, subscripts and superscripts should follow Roman symbols.

6. Chemical Nomenclature

Use IUPAC or Chemical Abstract conventions. As for abbreviation of chemical compound, follow international common use. If necessary, note in the main body or footnote. As for name of enzyme, follow rules of International Union of Biochemistry. As for refrigerant numbers, insert half space (or space of one quarter) between R and symbol such as R 134a.

7. References

Arrange in quotation order in the main text of the manuscript. Refer to the following instruction and examples. References should be typed with 9pt.

- (a) Journals; Name of author(s), Paper title, Name of journal, Year of publication, Volume (number), Pages (first and last page). Write Journal name in Italic and Volume in Bold face.
- (b) Books; Name of author(s), Title of Book, Volume (not necessary if it is completed in one volume), revision(editor), Year of publication, Publisher, Place of publication, quoted pages (first and last page).
- (c) Proceedings; Name of author(s), Name of proceedings, Place and Year of the conference, Volume, Pages (first and last page).
- (d) Engineering data (brochure); Name of engineering data: Company name of publication, (Publication year, month)
- (e) Patent; Name of inventor, Name of invention, the year of invention, the numbers of patent, application and/or registration.
- (f) Web site; URL of web site: (year and month of quotation)

Important note for authors citing articles written in Japanese. When referring to such reference, add "(in Japanese)" at the end of each description. If the cited work has an official English translation, authors are requested to use that translation. However, if the cited work does not have an official translation, authors are requested to translate the citation information into English and provide both English and Romanized Japanese.

References

- Tanaka, T., Study on Refrigeration, Transactions of the Japan Society of Refrigerating and Air Conditioning Engineers, 2009, 26(1), pp. 42-53. (in Japanese)
- Kaushik, S.C. and Arora, A., Energy and Exergy Analysis of Single Effect and Series Flow Double Effect Water-Lithium Bromide Absorption Refrigeration Systems, *International Journal of Refrigeration*, 2009, 32 (6), pp. 1247-1258.
- 3) Tanaka, T., "Refrigerating Machine", 1996, Japan Publishing Co., Tokyo, pp. 40-42. (in Japanese)
- Ito, J., "Air Conditioning", Vol. 3, 2nd ed., (ed. by T. Tanaka), 1983, Air Conditioning Press, Tokyo, pp. 45-46. (in Japanese)
- 5) Franks, F., "Effects of Low-temperatures on Biological Membranes", (ed. by Morris, G. J. and

- Clarke, A.), 1991, Academic Press, London, pp. 3-19.
- Kriss, A. E. (Translated from Russian by Shewan, J. M. and Kabata, Z.), "Low Temperature Preservation Foods", 1996, Oliver and Boyd, Edinburgh, UK, pp. 43-51.
- Lorentzen, G., Proceedings of New Applications of Natural Working Fluids in Refrigeration and Air Conditioning, Hannover, Germany (1994), pp. 23-36.
- 8) Jansen, M. J. P., Engels, F. L. M. and Kuijpers, L. J.
- M., Proc. 19th Int. Cong. Refrig., Hague, Netherlands (1995), Vol. IVb, pp.860-867.
- Reito, T. and Kucho, H., Proceedings of 2003 JSRAE Annual Conference, Tokyo (2003), pp. 1-4. (in Japanese)
- 10) Reito, T. and Kucho, H., "Refrigerator", 2002, US Patent 1234567.
- 11) http://www.jsrae.or.jp/ (Jan., 2014)