|  |  |
| --- | --- |
| cetlogo ***CHEMICAL ENGINEERING TRANSACTIONS*** ***VOL. 90, 2022*** | A publication ofaidiclogo_grande |
| The Italian Associationof Chemical EngineeringOnline at www.cetjournal.it |
| Guest Editors: Aleš Bernatík, Bruno FabianoCopyright © 2022, AIDIC Servizi S.r.l.**ISBN** 978-88-95608-88-4; **ISSN** 2283-9216 |

Insert Paper Title Here in Title Case [Style: CET Title]

Insert First Authora, John A. Smithb,\*, <first name> and <middle names> <family name> [Style: CET Authors]

|  |  |
| --- | --- |
| a | Affiliation and Address, no email [Style: CET Address] |
| b | Affiliation and Address, no email [Style: CET Address] |
| c | <carry on, delete if needed> |
|  | corresponding.author@domain.com [Style: CET Email] |

These instructions comply with the rules set by AIDIC for the publication of the papers in a volume in the series: Chemical Engineering Transactions.

Instructions:

* Use this template **DIRECTLY** to write and format your paper
* Select the appropriate **CET formatting style** (see square brackets in this template for style names) for your text by looking in the “Home” tab in the “Styles” box, e.g. use [Style: CET Body text] for the body
* **Replace this section** with your Abstractand **do not write the word Abstract** at the beginning.
The length of the Abstract cannot be more than half page.
* In the author list, please use an \* (asterisk) to mark the corresponding author. In the case of a single author, the asterisk is not required
* In case of all authors of the paper having the same affiliation, superscript letters should be omitted
* Please use just one (main) affiliation for each author, others should be in the Acknowledgments section
* The email of the corresponding author should be provided on a separate line after the affiliations
* For publication in CET, the corresponding author must agree to **copyright transfer** to AIDIC
	1. Introduction

Instructions:

* Do not attribute single statements to multiple references, i.e. lumped references, rather point to the unique contribution for each cited work and why it is important
* Citation in the text is given by the surname of the author(s) followed by the year of publication, e.g. Klemeš et al. (2016) or (Klemeš et al., 2016), where “et al.” is used for three or more authors
* Standard terms should be capitalised, e.g. Pinch, Composite Curves
* Avoid writing from the first-person perspective, e.g. do not write “I”, “we”, “our”
	+ 1. Page layout

The layout of the pages must follow the current format - do not modify the page setup (i.e. top, bottom and left 3 cm; right 2.5 cm) – including the header.

Instructions:

* Use exactly **6 pages** and avoid having large empty spaces including on the final page
* Avoid using bold or italics in the text, as these are reserved for headings
* Do not exceed the page’s margins with tables, text, or figures
* Do not insert Headers, Footers, Footnotes, page numbers
	+ 1. Section headings

Instructions:

* First level heading should use [Style: CET Heading1]
* Second and third level headings should use [Style: CET headingx]
* Section headings are typed in sentence case, e.g. only the letter and keywords with capitals
	1. Style guidelines

The general style guidelines are first given, followed by specific cases. First of all, avoid lower-level heading immediately following the higher-level one. It is recommended to have at least one sentence in-between.

* + 1. Clarity

For the text clarity it is suggested to limit additional words, which can be omitted or some archaic words see, e.g. “thereby”, wherein”, “herein”, “hitherto”, “Nonetheless”, “Perceivably” , “whereas”.

* + 1. Measurements, values and units

Instructions:

* Be consistent and accurate with the reporting of measurements and units
* Use SI units, where possible, e.g. the unit for year is “y”, not “a”, “h” for hours, “t” for tonnes
* If other units are mentioned, please give their equivalent in SI.
* Use the ISO symbol style – e.g. CO2 and not CO2
* Be accurate with the measurement units, e.g. “Km” does not mean “kilometres”, but “Kelvin-meters”.
* Always use a space between values and units, e.g. 100 m, 42 %, 234 °C, 504 K – do not mix degrees Celsius and Kelvin, please be consistent. Degrees Celsius are preferred.
* Please use the British style for numbers, i.e. 1,000,000.01, using a comma as the thousands separator, and a dot as the decimal separator.

When giving numerical values in derived measurement units, “billion” may refer to long and short scales:

* 1,000,000,000 (number), one thousand million, 109, in the short scale
* 1,000,000,000,000 (number), one million million, 1012, in the long scale

Please avoid using value modifiers, such as “billion” and “million”. It is recommended to use the exponents of 10 in the scientific notation, or the SI-style for scaling (e.g. k for “kilo”, meaning 103, or M for “mega”, meaning 106).

* 1. Equations, figures and tables
		1. Equations

Instructions:

* To add equations, copy the borderless table (below) and insert your equation
* Write the equation reference number on the right side and reference as Eq(1)
* Inside the equations, use font Arial, size 9 pt for the main text, if possible
* Format line and text using [Style: CET Equation] to ensure correct spacing around the equation

|  |  |
| --- | --- |
|  | (1) |

* + 1. Figures

Instructions:

* Figures and tables should be high quality images as shown in Figure 1
* Use high resolution images enhanced with colour, lines and text that are readable (do not distort)
* Images with captions both **aligned to the left margin**, ensuring the image(s) with caption are on the same page
* Two narrow figures may be placed side-by-side and must be referenced using “a” and “b”, i.e. Figure 1a
* Cross-references to figures (and tables) should use only the label and number, e.g. Figure 1 (not Fig.)



*Figure 1: Short captions of 1-2 lines should be placed below each illustration using [Style: CET Caption]*

* + 1. Tables

Instructions:

* **Copy and re-size the template table to your needs to ensure correct green line colours**
* Set the table and title **left aligned**,
* Place both table title and table on a single page
* Horizontal lines should be placed above and below table headings and at the bottom of the table
* Do not add vertical boarder lines or use bold or italics font in tables

Table 1: Table title using style [Style: CET Table title]

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Heading1  | Heading 2 | Heading 3 |  |  |
| Add rows |  |  |  |  |
|  |  |  |  |  |

* 1. Conclusions

It is **mandatory** to have conclusions in the manuscript, which point out the significance of the presented work. Please include quantitative results to strengthen appropriate conclusions. **Avoid writing a second abstract**.

Please do not use references in this Conclusion.

Nomenclature

a – mesh size, m

Afin – fin surface area, m2

Lex – fin extended length, m

Lc – fin length, m

n – number of mesh elements, -

Pl – longitudinal fin pitch, m

Pt – transversal fin pitch, m

rin – outer radius of a plain tube, m

T – fin surface local temperature, K

Tb – fin base temperature, K

Tcz – ambient temperature, K

w – fin width, m

x, y – cartesian coordinates

α - heat transfer coefficient, W/(m2·K)

λ – thermal conductivity, W/(m·K)

δ – fin thickness, m

η – fin efficiency, -

Acknowledgments

If applicable, write acknowledgments after the Conclusions section using style [Style: CET Body text].

References

References must be prepared according to the style in the example below using [Style: CET Reference text].

Instructions:

* **Citations to own work by the authors of the current manuscript are allowed, but abuse of self-citation is very much discouraged. Please limit the self-citations only to the most essential ones, with an absolute maximum of 3.**
* **Please eliminate all reference lumps by characterising each reference individually.** This can be done by mentioning 1 or 2 phrases per reference to show how it is different from the others and why it deserves mentioning.
* Reference to a source by a single author: (Raissi, 1994). Also, the author can be mentioned as part of the text. Raissi (1994) developed a cogeneration model for Total Site Integration.
* Reference to a source by two authors: (Varbanov and Friedler, 2008). Varbanov and Friedler (2008) discussed Fuel Cell Combined Cycles.
* When a reference is made to a source by three and more authors: (Chew et al., 2013). Chew et al. (2013) discussed implementation issues for Total Site Integration.
* Articles in-press can only be referenced if accepted and assigned a DOI number. Do not state “in press”
* When referencing conference proceedings, page (or lecture, poster) number(s) should be provided
* Remove hyperlinks (blue colour and underlining) from web references and remove “http://” prefix
* For books, reports, patents, thesis and dissertations the place and country where published should be provided.
* Two or more references by the same author published in the same year are differentiated by the letters a, b, c, etc. immediately after the year
* The references should be listed in **alphabetical order** in the Reference list
* Within the list of references, all contributing authors should be preferably listed for each reference. Using in the list of references just “et al.” is politically and socially incorrect, and also impolite. The names of the minimum first six authors have to be provided.
* For referenced sources, written in languages other than English, all titles of references should be fully translated, and behind the references, a note, e.g. (in French) should be made

Example of correctly formatted references in alphabetical order:

Chew K.H., Klemeš J.J., Wan Alwi S.R., Abdul Manan Z., 2013, Industrial implementation issues of Total Site Heat Integration, Applied Thermal Engineering, 61, 17–25.

Klemeš J.J. (Ed), 2013, Handbook of Process Integration (PI): Minimisation of Energy and Water Use, Waste and Emissions, Woodhead Publishing Limited, Cambridge, UK.

Klemeš J.J., Varbanov P., Lam H.L., 2009, Water Footprint, water recycling and Food Industry Supply Chain, Chapter In: K Waldron (Ed.), Waste management and co-product recovery in food processing, Vol 2, Woodhead Publishing Limited, Cambridge, UK, 134 – 168.

Raissi K., 1994, Total site integration, PhD Thesis, University of Manchester Institute of Science and Technology, Manchester, UK.

US DoE, 2016, Steam Turbines, US Department of Energy <energy.gov/sites/prod/files/2016/09/f33/CHP-Steam%20Turbine.pdf> accessed 24.07.2017.