

BUKTI KORESPONDENSI
ARTIKEL JURNAL INTERNASIONAL BEREPUTASI

Judul artikel : Power Optimization of Horizontal Axis Wind Turbine Rotor Capacity of 1 MW on Various Parameters of The Airfoil, Angle of Attack, And A Pitch Angle.
Jurnal : Journal of Advanced Research in Fluid Mechanics and Thermal Sciences
Penulis : Kriswanto, S.Pd., M.T.

No.	Perihal	Tanggal
1.	Bukti konfirmasi submit artikel dan artikel yang disubmit	26 Januari 2023
2.	Bukti konfirmasi review dan hasil review pertama	5 Februari 2023
3.	Bukti konfirmasi submit revisi, respon kepada reviewer, dan artikel yang diresubmit	26 Februari 2023
4.	Bukti konfirmasi artikel <i>accepted submission</i>	28 Februari 2023
5.	Bukti konfirmasi artikel <i>production (copyedited)</i>	16 Maret 2023
6.	Bukti Konfirmasi publish	31 Maret 2023
7.	Bukti Konfirmasi available in SCOPUS	2 Mei 2023
8.	Artikel available online	24 Februari 2023

1. Bukti konfirmasi submit artikel dan artikel yang disubmit (26 Januari 2023)



99+



10 of 16

Mail

[J. Adv. Res. Fluid Mech. Therm. Sc.] Submission Acknowledgement

External Inbox x



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Meet



Dr. Nor Azwadi Che Sidik <azwadi@akademiabaru.... Thu, Jan 26, 2023, 8:46 AM
to me

Kriswanto:

Thank you for submitting the manuscript, "EIC-Power Optimization of Horizontal Axis Wind Turbine Rotor Capacity of 1 MW on Various Parameters of The Airfoil, Angle of Attack, And A Pitch Angle" t Journal of Advanced Research in Fluid Mechanics and Thermal Sciences. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Submission URL: https://semarakilmu.com.my/journals/index.php/fluid_mechanics_thermal_scienc/authorDashboard/submission/1626



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2. Bukti konfirmasi review (email dan OJS) dan hasil review pertama (5 Februari 2023)

[J. Adv. Res. Fluid Mech. Therm. Sc.] Editor Decision

2 messages

Nor Azwadi <azwadi@akademiabaru.com>
To: Kriswanto <kriswanto@mail.unnes.ac.id>

Sun, Feb 5, 2023 at 7:59 PM

Kriswanto:

We have reached a decision regarding your submission to Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, "EIC-Power Optimization of Horizontal Axis Wind Turbine Rotor Capacity of 1 MW on Various Parameters of The Airfoil, Angle of Attack, And A Pitch Angle".

Our decision is: Revisions Required

Please submit the revised article by 25 Feb 2023

Editorial Comments:

Please cite few articles from

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Please proofread the whole manuscript.

Improve the quality of all figures.

[Journal of Advanced Research in Fluid Mechanics and Thermal Sciences](#)

Kriswanto Unnes <kriswanto@mail.unnes.ac.id>
To: Nor Azwadi <azwadi@akademiabaru.com>

Sun, Feb 26, 2023 at 3:38 PM

Dear JARMFT editors.

Thanks for the information and suggestions for improving our articles. I sent an article that added citations and was revised according to the editor's suggestions.

[Quoted text hidden]

**Power rotor optimization Februari 2023.docx**
1080K

Konfirmasi review di OJS SEMARAK ILMU

The screenshot shows a web browser window with the URL `semarakilmu.com.my/journals/index.php/fluid_mechanics_thermal_sciences/authorDashboard/submission/1626`. The page displays a notification from the *Journal of Advanced Research in Fluid Mechanics and Thermal Sciences*. The notification is titled "[J. Adv. Res. Fluid Mech. Therm. Sc.] Editor Decision" and is dated 2023-02-05 12:59 PM. The sender is identified as Kriswanto. The message states: "We have reached a decision regarding your submission to Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 'EIC-Power Optimization of Horizontal Axis Wind Turbine Rotor Capacity of 1 MW on Various Parameters of The Airfoil, Angle of Attack, And A Pitch Angle'." The decision is "Revisions Required", with a deadline to submit the revised article by 25 Feb 2023. Editorial comments include the instruction to "Please cite few articles from" and a list of five URLs from the journal's website. The final instruction is "Please proofread the whole manuscript." The browser's taskbar at the bottom shows the time as 12:49 on 20/06/2024.

Notifications

[J. Adv. Res. Fluid Mech. Therm. Sc.] Editor Decision

2023-02-05 12:59 PM

Kriswanto:

We have reached a decision regarding your submission to Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, "EIC-Power Optimization of Horizontal Axis Wind Turbine Rotor Capacity of 1 MW on Various Parameters of The Airfoil, Angle of Attack, And A Pitch Angle".

Our decision is: Revisions Required

Please submit the revised article by 25 Feb 2023

Editorial Comments:

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- <http://www.akademilabaru.com/submit/index.php/arefmht>
- <http://www.akademilabaru.com/submit/index.php/aram>

Please proofread the whole manuscript.

3. Bukti konfirmasi submit revisi, respon kepada reviewer, dan artikel yang diresubmit (26 Februari 2023)

[J. Adv. Res. Fluid Mech. Therm. Sc.] Editor Decision

2 messages

Nor Azwadi <azwadi@akademiabaru.com>
To: Kriswanto <kriswanto@mail.unnes.ac.id>

Sun, Feb 5, 2023 at 7:59 PM

Kriswanto:

We have reached a decision regarding your submission to Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, "EIC-Power Optimization of Horizontal Axis Wind Turbine Rotor Capacity of 1 MW on Various Parameters of The Airfoil, Angle of Attack, And A Pitch Angle".

Our decision is: Revisions Required

Please submit the revised article by 25 Feb 2023

Editorial Comments:

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Please proofread the whole manuscript.

Improve the quality of all figures.

[Journal of Advanced Research in Fluid Mechanics and Thermal Sciences](#)

Kriswanto Unnes <kriswanto@mail.unnes.ac.id>
To: Nor Azwadi <azwadi@akademiabaru.com>

Sun, Feb 26, 2023 at 3:38 PM

Dear JARMFT editors.

Thanks for the information and suggestions for improving our articles. I sent an article that added citations and was revised according to the editor's suggestions.

[Quoted text hidden]

**Power rotor optimization Februari 2023.docx**
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Konfirmasi submit revisi di OJS SEMARAK ILMU

The screenshot shows the author dashboard for submission 1626. A modal window titled "Manuscript status" is open, displaying the following information:

- Participants:** Nor Azwadi (norazwadi), Kriswanto (kriswanto)
- Messages:**

Note	From
I apologize for the delay in submitting the revision, which was caused by the overwhelming number of incoming emails that were not read. After reading the message, I revised and sent it on 26-2-2023.	kriswanto 2023-02-28 01:36 AM
- Attachments:** Power rotor optimization Februari 2023.docx
- Buttons:** Add Message

The background shows a table of review discussions with one entry for "Manuscript status" from kriswanto on 2023-02-28 01:36 AM.

The screenshot shows the submission details for submission 1626. The page includes the following sections:

- Editor Decisions:** Two entries for "[J. Adv. Res. Fluid Mech. Therm. Sc.] Editor Decision" with dates 2023-02-28 04:28 AM and 2023-03-16 09:15 AM.
- Reviewer's Attachments:** No files are listed.
- Revisions:** One revision is listed: "9479 Power rotor optimization Februari 2023.docx" submitted in February 2023.
- Review Discussions:** A table showing one discussion entry for "Manuscript status" from kriswanto on 2023-02-28 01:36 AM.

4. Bukti konfirmasi artikel accepted (28 Februari 2023)



Kriswanto Unnes <kriswanto@mail.unnes.ac.id>

[J. Adv. Res. Fluid Mech. Therm. Sc.] Editor Decision

1 message

Nor Azwadi <azwadi@akademiabaru.com>
To: Kriswanto <kriswanto@mail.unnes.ac.id>

Tue, Feb 28, 2023 at 11:28 AM

Kriswanto:

We have reached a decision regarding your submission to Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, "EIC-Power Optimization of Horizontal Axis Wind Turbine Rotor Capacity of 1 MW on Various Parameters of The Airfoil, Angle of Attack, And A Pitch Angle".

Our decision is to: Accept Submission

Thank you

Truly

Editor-in-chief, Journal of Advanced Research in Fluid Mechanics and Thermal Sciences

[Journal of Advanced Research in Fluid Mechanics and Thermal Sciences](#)

Konfirmasi artikel accepted di OJS SEMARAK ILMU

The screenshot shows a web browser window with the URL `semarakilmu.com.my/journals/index.php/fluid_mechanics_thermal_sciences/authorDashboard/submission/1626`. A notification pop-up is displayed over the page content. The notification is titled "[J. Adv. Res. Fluid Mech. Therm. Sc.] Editor Decision" and is dated "2023-02-28 04:28 AM". The recipient is "Kriswanto:". The message text reads: "We have reached a decision regarding your submission to Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, 'ETC-Power Optimization of Horizontal Axis Wind Turbine Rotor Capacity of 1 MW on Various Parameters of The Airfoil, Angle of Attack, And A Pitch Angle'. Our decision is to: Accept Submission". The notification is signed by "Truly" and "Editor-in-chief, Journal of Advanced Research in Fluid Mechanics and Thermal Sciences". A link to the journal's website is provided at the bottom of the notification. The background page shows a sidebar with navigation options like "Workflow", "Submissions", and "Round 1". The Windows taskbar at the bottom shows the date and time as "12:51 20/06/2024".

Notifications

[J. Adv. Res. Fluid Mech. Therm. Sc.] Editor Decision

2023-02-28 04:28 AM

Kriswanto:

We have reached a decision regarding your submission to Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, "ETC-Power Optimization of Horizontal Axis Wind Turbine Rotor Capacity of 1 MW on Various Parameters of The Airfoil, Angle of Attack, And A Pitch Angle".

Our decision is to: Accept Submission

Thank you

Truly

Editor-in-chief, Journal of Advanced Research in Fluid Mechanics and Thermal Sciences

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Reviewer's Attachments

No Files

12:51
20/06/2024

5. Bukti artikel *production (copyedited)* dan artikel (16 Maret 2023)

Browser tabs: (66) WhatsApp, Berkas Kekurangan, KURIKULUM TRAN, Journal of Advanc, SISTER | Tridharma, Kriswanto et al. | P

Address bar: semarakilmu.com.my/journals/index.php/fluid_mechanics_thermal_sciences/authorDashboard/submission/1626

Page title: Journal of Advanced Research in Fluid Mechanics and Thermal Sciences

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2023-03-16 09:15 AM

Kriswanto:

The editing of your submission, "EIC-Power Optimization of Horizontal Axis Wind Turbine Rotor Capacity of 1 MW on Various Parameters of The Airfoil, Angle of Attack, And A Pitch Angle," is complete. We are now sending it to production. Kindly find the copyedited manuscript under the copyediting tab for your perusal.

Thank you

Submission URL:
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[Journal of Advanced Research in Fluid Mechanics and Thermal Sciences](#)

Workflow: Submission, Round 1, Round 2, Round 3, Round 4, Round 5, Round 6, Round 7, Round 8, Round 9, Round 10, Round 11, Round 12, Round 13, Round 14, Round 15, Round 16, Round 17, Round 18, Round 19, Round 20, Round 21, Round 22, Round 23, Round 24, Round 25, Round 26, Round 27, Round 28, Round 29, Round 30, Round 31, Round 32, Round 33, Round 34, Round 35, Round 36, Round 37, Round 38, Round 39, Round 40, Round 41, Round 42, Round 43, Round 44, Round 45, Round 46, Round 47, Round 48, Round 49, Round 50, Round 51, Round 52, Round 53, Round 54, Round 55, Round 56, Round 57, Round 58, Round 59, Round 60, Round 61, Round 62, Round 63, Round 64, Round 65, Round 66, Round 67, Round 68, Round 69, Round 70, Round 71, Round 72, Round 73, Round 74, Round 75, Round 76, Round 77, Round 78, Round 79, Round 80, Round 81, Round 82, Round 83, Round 84, Round 85, Round 86, Round 87, Round 88, Round 89, Round 90, Round 91, Round 92, Round 93, Round 94, Round 95, Round 96, Round 97, Round 98, Round 99, Round 100

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Address bar: semarakilmu.com.my/journals/index.php/fluid_mechanics_thermal_sciences/authorDashboard/submission/1626

Page title: Journal of Advanced Research in Fluid Mechanics and Thermal Sciences

Workflow: Publication

Submission | Review | Copyediting | Production

Copyediting Discussions

Name	From	Last Reply	Replies	Closed
Copy editor has been assigned	chieftechnicaleditor 2023-03-03 08:04 AM	kriswanto 2023-03-03 08:17 AM	1	<input type="checkbox"/>
Email address	chieftechnicaleditor 2023-03-15 04:19 AM	kriswanto 2023-03-16 08:22 AM	3	<input type="checkbox"/>
article revision	kriswanto 2023-03-25 08:22 AM	kriswanto 2023-03-27 12:20 AM	2	<input type="checkbox"/>

Copyedited

ID	Title	Month	File Name
9975	1626-Power Optimization of The Horizontal Axis Wind Turbine Capacity of 1 MW on Various Parameters of The Airfoil, an Angle of Attack and a Pitch Angle.docx	March	Article Text

System tray: 12:54, 20/06/2024

6. Konfirmasi publish (31 Maret 2023)

Congratulations, your paper has been published!

2 messages

notification <notification@akademiabaru.com>

Fri, Mar 31, 2023 at 8:30 AM

To: kriswanto@mail.unnes.ac.id, adnanbayu23@gmail.com, aljanan@mail.unnes.ac.id, rizqi_fitri@mail.unnes.ac.id, ar_unnes@mail.unnes.ac.id, hendrix@mail.unnes.ac.id, rizkisetiadi@mail.unnes.ac.id, febribudi@mail.unnes.ac.id, andrisetiyawan@mail.unnes.ac.id, j.jamari@gmail.com
 Cc: Nor Azwadi Che Sidik <azwadi@akademiabaru.com>

Congratulations, your paper has been published!

Dear Kriswanto, Muhammad Adnan Bayu Setiawan, Dony Hidayat Al-Janani, Rizqi Fitri Naryanto, Ahmad Roziqin, Hendrix Noviyanto Firmansyah, Rizki Setiadi, Febri Budi Darsono, Andri Setiyawan, Jamari

Your work has now been published in the [Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, Volume 103, No. 2](#)

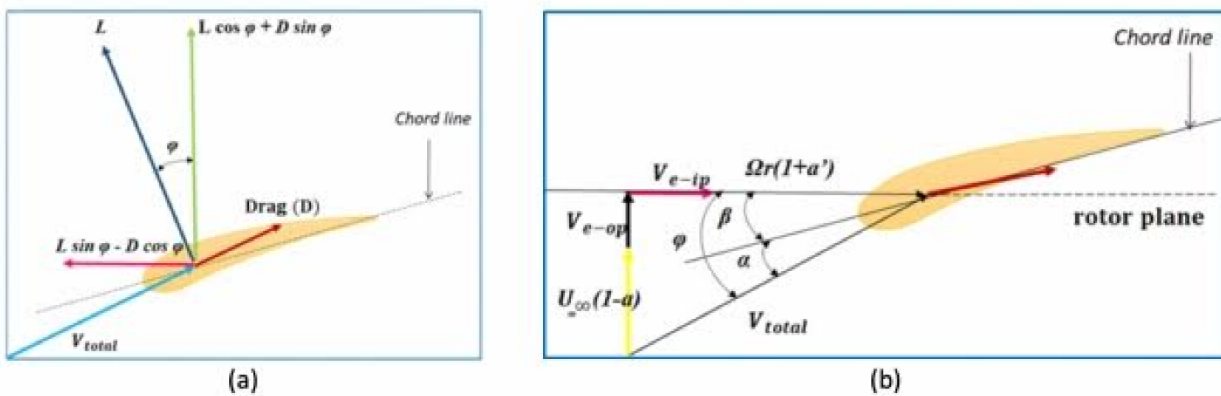


Fig. 1. Local element (a) forces (b) velocities and flow angles [13]

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7. Konfirmasi available in SCOPUS (2 Mei 2023)

Congratulations, your paper is now available in SCOPUS!

1 message

notification <notification@akademiabaru.com>

Tue, May 2, 2023 at 8:48 AM

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Cc: Nor Azwadi Che Sidik <azwadi@akademiabaru.com>

Congratulations, your paper is now available in SCOPUS!

Dear Kriswanto, Muhammad Adnan Bayu Setiawan, Dony Hidayat Al-Janan, Rizqi Fitri Naryanto, Ahmad Roziqin, Hendrix Noviyanto Firmansyah, Rizki Setiadi, Febri Budi Darsono, Andri Setiyawan, Jamari

Your published work in the [Journal of Advanced Research in Fluid Mechanics and Thermal Sciences, Volume 103, No. 2.](#)

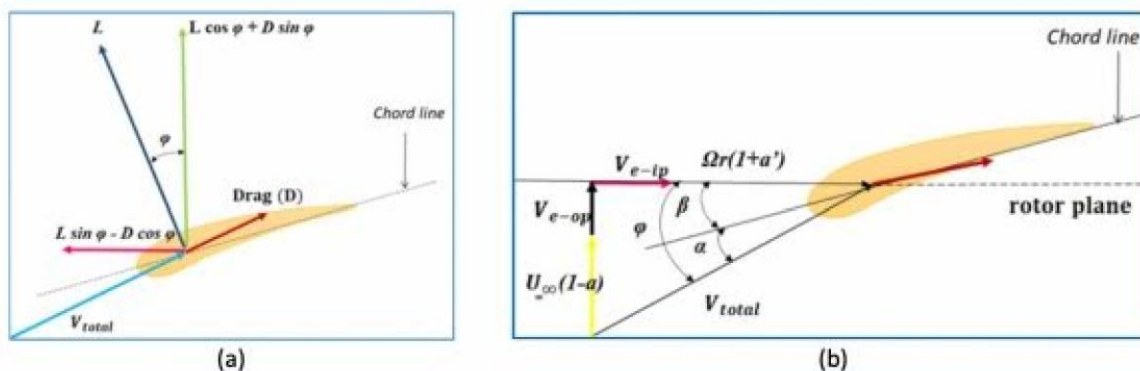


Fig. 1. Local element (a) forces (b) velocities and flow angles [13]

[Power Optimization of The Horizontal Axis Wind Turbine Capacity of 1 MW on Various Parameters of The Airfoil, an Angle of Attack, and a Pitch Angle](#)

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Kriswanto, Muhammad Adnan Bayu Setiawan, Dony Hidayat Al-Janan, Rizqi Fitri Naryanto, Ahmad Roziqin, Hendrix Noviyanto Firmansyah, Rizki Setiadi, Febri Budi Darsono, Andri Setiyawan, & Jamari. (2023). Power Optimization of The Horizontal Axis Wind Turbine Capacity of 1 MW on Various Parameters of The Airfoil, an Angle of Attack, and a Pitch Angle. *Journal of Advanced Research in Fluid Mechanics and Thermal Sciences*, 103(2), 141–156.

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- Talk to other researchers about your paper, and email copies of your paper to researchers who may be interested. Create a blog or a website dedicated to your research and share it.
- Cite your own past papers as appropriate to increase visibility of your published papers.

Thank you again for publishing with us. We wish you the best success with your research.

Kind regards

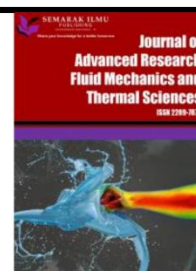
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8. Publish online artikel (24 Februari 2023)



Journal of Advanced Research in Fluid Mechanics and Thermal Sciences

Journal homepage:
https://semarakilmu.com.my/journals/index.php/fluid_mechanics_thermal_sciences/index
ISSN: 2289-7879



Power Optimization of The Horizontal Axis Wind Turbine Capacity of 1 MW on Various Parameters of The Airfoil, an Angle of Attack, and a Pitch Angle

Kriswanto^{1,*}, Muhammad Adnan Bayu Setiawan¹, Dony Hidayat Al-Janani¹, Rizqi Fitri Naryanto¹, Ahmad Roziqin¹, Hendrix Noviyanto Firmansyah¹, Rizki Setiadi¹, Febri Budi Darsono¹, Andri Setiyawan¹, Jamari²

¹ Department of Mechanical Engineering, Universitas Negeri Semarang, Gd E5 Kampus UNNES, Semarang, Indonesia

² Department of Mechanical Engineering, University of Diponegoro, Jl. Prof. Sudharto Kampus UNDIP, Semarang, Indonesia

ARTICLE INFO

Article history:

Received 25 October 2022

Received in revised form 3 February 2023

Accepted 11 February 2023

Available online 24 February 2023

Keywords:

Airfoil; angle of attack; blade element momentum; HAWT; optimization; pitch angle; wind speed

ABSTRACT

The rotor is one of the vital components of a wind turbine. In the design of the rotor, the expected result is the most optimal power. This purpose study is to optimization of the Horizontal Axis Wind Turbine power of various parameters such as airfoil, angle of attack, and pitch angle. Airfoils (NACA 4412-2412 T.E. mod, NACA 2412-4412 T.E. mod, NACA 4412-2412 L.E. mod, NACA 2412-4412 L.E. mod), angle of attack (0, 2, 4, 6), and pitch angle (0, 1, 2, 3) are the parameter variations used. The simulation method uses BEM (Blade Element Momentum), and the Taguchi for optimization is based on the L16 orthogonal array matrix. The ANOVA has to determine the contribution of each parameter to the HAWT power generated. Simulation and optimization results show that the most optimal parameter was a NACA airfoil 4412-2412 L.E. mod, at 0° angle of attack and 0° pitch angle, with the resulting power reaching 1015780 Watt. The ANOVA analysis shows the airfoil parameter has the greatest contribution to the rotor power of the HAWT compared to the angle of attack and pitch angle.

1. Introduction

The Southeast Asian region has a lot of potential for using wind energy in wind turbines; one such area is Indonesia, where wind speeds can reach 4-7 m/s [1]. Therefore, based on the Beaufort scale, the wind speed is classified as low-medium [2]. Moreover, the medium wind speed classification has the potential to be utilized but has not been able to produce effective and high power. Wind speed in the range of 2 to 7 m/s is relatively suitable for small-capacity power plants, namely 10-100 kW [3], and it is necessary to develop wind energy conversion tools according to wind speed.

* Corresponding author.

E-mail address: kriswanto@mail.unnes.ac.id

<https://doi.org/10.37934/arfmts.103.2.141156>