

Dear Tineke Saroinsong,

We have to inform you that there have been some changes recommended by the reviewers of your article "**Fluid flow phenomenon on a three bladed screw turbine Archimedes power generation**"

by Authors: **Tineke Saroinsong Rudy Soenoko Slamet Wahyudi and Mega N Sasongko**

Reviewers Comments:

The article is about an interesting topic (Archimedes screw generators) that are not extensively covered in the current literature. That said, the authors seem to be mostly attempting to experimentally characterize the performance of an Archimedes screw. This is not particularly novel, although a very clearly and carefully written documentation of a carefully executed experimental study (with clear discussion of measurement uncertainties) would be a useful addition to the literature. Unfortunately, the quality of writing in the current manuscript is poor, and details (or lack of details) suggest a rushed process of experimentation and writing. Therefore, I cannot recommend the current manuscript for publication.

The article needs significant additional editing for english grammar and clarity. For example, even the title of the article is grammatically incorrect. I suggest "Fluid Flow Phenomenon in a Three-Bladed Power-Generating Archimedes Screw Turbine". Almost all sentences are grammatically incorrect. The text should be divided into appropriate paragraphs.

A few specific comments: Abstract:

"the number of helix turns are 21" - does this mean each flight is 21 turns in length, or each of the 3 flights is 7 turns in length.

"Declivity" is not a regular english word. I believe the authors mean "slope." Introduction:

I would not call an Archimedes screw a "reaction turbine" - the driving mechanism (static pressure of water) is different than in conventional (e.g. Francis or Kaplan) reaction turbines.

I do not understand the topic sentence: "The focus of this research is the fluid flow phenomenon between the blades of the screw which is influenced by the inflow turbine depth, speed and turbine shaft declivity." This must be clarified.

Principles of Archimedes screw turbine power generation:

Equations 1 and 2 appear to be general forms of control volume conservation equations. Variables are not defined.

The writing in this section is too poor to allow evaluation of the calculation process. There are two equations numbered "7".

Permission will be needed from the original publisher to republish Fig. 1.

Research Method:

Fig. 3b is out of focus.

Give additional, detailed and specific information on torque and volume flow rate measurement. In a screw of this size, it is important for the reader to know what level of uncertainty may be included in the measurements. It is easily possible that measurement uncertainty is large enough to limit the conclusions that can be drawn from the experimental measurements.

How does the "spring scale"/"prony brake" account for the non-horizontal rotation axis of the Archimedes screw?

Each set of variables was measured at three different times. Were these results averaged? were median values used?

Results and Discussion:

The Froude number is an important parameter in the discussion but it is not defined in terms of your variables anywhere in the manuscript. This must be done. There are several possible characteristic velocities and characteristic lengths that could be used in the definition of Fr. Without a clear definition, numeric values of Fr are meaningless.

The flow visualization results are interesting, but it is difficult to determine if they are significant. Without arrows pointing out the flow feature being discussed, I am not sure what to make of Figs. 4-6 and 8-10. This is a very qualitative study, explained poorly, which makes it difficult to evaluate. Results are shown for 50 rpm, a few comments are made suggesting other speeds were investigated (e.g. Fig. 13). But there doesn't seem to be much discussion of this important factor.

Kind regards,

Prof. D. V. Bandekas
Editor - in - Chief
Journal of Engineering Science and Technology Review
Tel:00302510462247
Email: editor@jestr.org

From: Tineke Saroinsong <tinekesaroinsong@gmail.com>
Date: December 22, 2015 at 14:11:48
To: Editor JESTR <editor@jestr.org>>
Cc: dbandek@teikav.edu.gr <dbandek@teikav.edu.gr>>
Subject: Research article

Dear, Prof. D. V. Bandekas

I had sent my research article " Fluid flow phenomenon on a three bladed screw turbine Archimedes power generation" and it had been received by you since 10 November 2015. Would you like to tell me the review process ? Thank you.

Kind regards

Tineke Saroinsong

From: Tineke Saroinsong tinekesaroinsong@gmail.com @
Subject: Re: Research article
Date: 9 June 2016 16.30
To: Editor JESTR editor@jestr.org



Dear Prof D.V. Bandekas

I would like to inquire about my research article that i had been revised since 6 February 2016.
Thank you.

Regards
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Pada tanggal 22 Des 2015 21.50, "Editor JESTR" <editor@jestr.org> menulis:

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