

REVIEWS ON THE MANUSCRIPT [9]

Reviewer 1:

Comments:

The article focuses on the analysis of the frequency of the sound produced by the rod, disregarding other sound parameters (amplitude, timber, color).

Hint: why the rod shrieks? Why that sound is called a shriek?

The strongest and the weakest aspect of the paper:

The strongest aspect of the paper is the experimental analysis of many factors which change the frequency of the shrieking rod (type of hitting, rod diameter, place of hitting).

The weakest aspect of the paper is that only frequency of the sound is the main sound characteristic analyzed.

Also, the language is sometimes hard to understand.

The theoretical part is minimal.

Organization and Presentation:

The structure is well chosen, however the paragraphs should be better formatted (spacing between abstract, and keywords, and introduction, etc.)

Some adjustments should be made to the abstract, in which you should describe the problem, your approach to solve it, and add few sentences summarizing your conclusions.

Style:

The article is sometimes hard to understand. The language is sometimes unclear and unspecific ("this node is really critical in understanding the accurate pattern of longitudinal and transverse waves" *Node is critical or analysis of the position of nodes is critical? What is a pattern of a wave?*).

You should write shorter sentences, and try to use non-hermetic phrases ("There is a node at holding point", "by certain parts of the length not all of it" → ?)

Keep track of the commas, dots and big/small letters.

Example:

"A metallic rod is quite similar to a tube which is open from both ends so when it comes to longitudinal motion only the fundamental frequency or harmonics which have the same place of nodes with the holding point can be observed."

→ "A metal rod can be analyzed theoretically in similar way as a tube opened from both ends. In case of longitudinal oscillations, only the fundamental frequency and harmonics, for which the nodes are at the same place as holding point can be observed."

Additional Questions:

- What is the main cause of the sound?

- Are the transverse and longitudinal waves the only type of waves that exist in the rod?
- What do you mean by diagram in “These frequencies can be observed in the diagram”, page 4?

References:

The author refers to some interesting articles and books on the subject. However, not all the references are mentioned in the text. It is sometimes unclear, if the reference is a book or journal and what is what in reference (proper order: authors, title of book/article, title of journal/publisher, issue, volume, number, number of pages, year of publishing)

An example of a reference to a scientific article:

[1] Arce, H., Xu, A., González, H., Guevara, M. R. Alternans and higher-order rhythms in an ionic model of a sheet of ischemic ventricular muscle. Chaos 10: 411-426. (2000)

Recommendation:

- Check all the comments written in this review. Try to apply.
- Re-write the article with careful consideration of the style.
- Change and repair the resolution of the pictures (they are very hard to read). Sometimes the description of the picture is in the margin, out of the printing area – repair it. The same comment for equations (e.g. page 5).
- Attach a chapter with a discussion of limitations of your solution.

Summary:

The manuscript is recommended for publication only upon an essential revision and style check.

Reviewer 2:

Page 2: “diagram(amplitude verses frequency)”. It is called spectrum. Use the term in the manuscript.

Page 3: “young modulas”. It is called “Young's modulus”.

Try re-plotting your graphs in some graph-oriented software (like Origin or Advanced grapher). At least format them in a scientific way (big points, no lines between experimental points, and at least no line smoothing). No “bad” notations on each axis (like zero frequency).

Try re-plotting the spectra in more suitable software.

Effect of place of hitting: an additional theoretical investigation needed. Why there is no change even if we hit at a node?

The paper is quite well written. Structure is good. Article is recommended to be published if descriptions are added and suggested changes are made.

Editorial request

References: Please type the references in a way that the readers may immediately understand where and how they may look for a document. Add volumes and journal titles. Note that providing the positions and affiliations of authors is not necessary and is not a common practice.

What parts of the manuscript rely on or cite the references [2-5]?

Language: Ask a friend or a few friends to scrupulously check and proofread your English throughout the text. The improvements might be minor, but they would make the entire manuscript much better legible and much better looking.

Layout: Avoid any essential elements (e.g.: legends of spectra) on the margins of a page.

Typeset the values of frequencies on pages 3, 4, 5, as tables, not as continuous blocks of text.

All five frequency vs length graphs: there is absolutely no need to connect experimental data points with lines, if a nice theoretical curve fits well the data.

Firstly, these connecting lines are physically unjustified; secondly, they make it much more difficult to distinguish the smooth theoretical fit.

All five spectra: improve each x-axis (frequency) on each of these spectra. The scale is now small and the values will not be visible upon publication.

Parentheses: use blank spacing before each “(“ and after each “)”, each time they appear in the text.