



Problem 26. Boiling Water

Team Nitro

Reviewer: Alex Danciu

Summary

Problem statement: A noise is heard if water is boiled in a kettle.
Investigate how this noise changes with time.

Summary: In his presentation, he measured the parameters of the sound produced using a phone app. He graphed the data and drew relevant conclusions from it.

The Report

- Pros

- +good explanation of the phenomenon

- +included calculations

- +good videos to showcase the experiment

- +used a special app to pick up the noise

- Cons

- did not specify the size of the kettle and if it influences the experiment

- did not determine the properties of the sound, like amplitude and frequency

- did not say about the material of the kettle and if it would influence the sound.

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The Opposition

- Pros

- +asked detailed questions about the experiment

- +
+
+

- Cons

- Did not talk about any specific parts of the presentation and only used generic terms

- Did not point out many of the weak points of the presentations that were clearly seen in his theoretical and experimental part

- Did not propose a method of measuring sound intensity and frequency

- Poor time management

The discussed topics

- Opponent question

- 1)What is the sound affected by?
- 2)Does the pressure of the water affect the bubbles?
- 3)Why didn't you take into consideration your altitude when stating the boiling point of water?
- 4)Does the power of the kettle affect the experiment?
- 5) Does the material of the kettle affect the sound produced because the phone was touching the kettle?

- Reporter answer

- 1)We said in our presentation that the size of the bubbles affects the sound(agreed)
- 2)Yes, we said that in our presentation
- 3)That is a very good point and i agree with you
- 4)Yes it does