REVIEWS ON THE MANUSCRIPT [24-2]

Reviewer 1:

Comments:

The current version of the article is much more understandable. The reviewer is satisfied with the answers to the concerns and problems presented in the first review.

There are still some drawbacks of the solution (the author states the limitations of his solution scattered through the text, the explanation of the used notation is still unclear), but in overall all of them can be accepted.

Summary:

The article is recommended for publication now.

If it would be possible to add a list of all variables and constants (with explanation) used in the last formula, it would be very beneficial for the article.

Reviewer 2:

The manuscript includes interesting results and acceptable analysis. The style and structure has been improved sufficiently.

Plots and trends need to be revised. What are the trends? (Any information regarding the curve fitting, e. g. curve equation, regression, etc.)

Could you plot any prediction from the theory?

Figure 2 right seems unacceptable and insufficient to prove the theory. Note that a parabola would be fitted to any 3 points! Please consider the points mentioned by the previous reviewers regarding the plots.

"**Figure 3**": Why does the slope suddenly change?

The second Paragraph of the "**Introduction**", mentioning the facts about transparent ice and the reasons of air bubbles probably need a reference. Please provide if possible.

It was not so clear how the experiments were made in the transparent region only. Were the experiments stopped when the wire reaches the bubbles?

First paragraph in the "**Experimental Setup**": I did not understand how a piece of wood reduces melting. Is it compared with another material?

Can you examine your revised theory with results of Table 1 or any other experiments? (It would be great to see a figure regarding the comparison of the revised theory and experiments.)

"Qualitative Experiments" second paragraph "than" ➔ "then"

Editorial request:

Figure 2 (right) : consider implementing a better way to present the data. *Why* parabola is used for fitting, given the expectedly large error bars for diameters (x-axis) and the fact that even a linear function would provide an equally good fit?

Temperatures : use a blank spacing between the value of a temperature and the centigrade symbol.