

Letter to the
Editor

Standard Nomenclature List

Dear Editor,

It was with great interest that I learned of the efforts by a group of journal editors (including yourself) to produce a “standard” nomenclature list for heat transfer which will be used for all the journals represented. The adoption of such a list is obviously a considerable step forward for the journals and I was pleased to learn that the list developed through the discussions at the International Heat Transfer Conferences (led by Dr. Yon Mayhew) had served as basis. Indeed, the vast majority of symbols are identical to this earlier list and some of the best features of the IHTC list have been retained (for example, the use of consistent nomenclature for quantity, flow, and flux—e.g., M , \dot{M} , \dot{m}). The new list differs from the IHTC list only in essentials!

Having spent many tedious hours discussing these questions (both at the IHTC’s and in many other meetings) I had thought that the question of nomenclature had been finally settled and I certainly do not wish to go through the unproductive and time-consuming process all over again. However, it does seem to me that symbols from the IHTC list had been developed as a result of input from a wide variety of sources and should not be abandoned without some thought being given to the matter! One of the most contentious issues (on which those of us involved in the original discussions spent many hours) was the symbol of heat transfer coefficient, arguably the most important symbol in the list. The use of the symbol α was common European practice whereas the U.S. and U.K. practice was to use h . Clearly, the use of h was not very sensible since the same symbol is used for enthalpy and there are a significant number of cases when both symbols might be used in the same equation. However, such was the tradition of using h that it was allowed as an *alternative* symbol in the IHTC

list. In the original discussions, a compromise was reached in which α was adopted for film coefficient and U for overall coefficient. To simply choose h in the new list is to ignore all the earnest deliberations which had gone on before (not that there is anything new in this approach in this area!). I had been very reluctant to make the change to α but gradually, I got used to it! Now, if we used the Editors list, we will have to go through the reverse process—ugh!

An area which is also a cause for considerable concern is that of the symbols used for physical properties. Here, I think it is essential to use symbols which are consistent with those adopted by the ISO. People like myself have been brought up using μ for viscosity and it has been a real struggle to change to the ISO standard η . Now, the Editors have overruled the ISO, I suppose that the struggle has been in vain!

As a practical way out of the problem, the Editors might like to consider using the IHTC symbols as alternatives. It is very tempting to fix on a given symbol, but if the choice is debatable or even irrational, then an error is propagated into the future!

I realize that I have little hope of changing the newly adopted list and I certainly do not wish to enter into further protracted discussions about this area. This letter is mainly to assuage the guilt I would have felt had I not reacted in some way!

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