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**On the Clausius equality and inequality.**

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Summary: This paper deals with subtleties and misunderstandings regarding the Clausius relation. We start by demonstrating the relation in a new and simple way, explaining clearly the assumptions made and the extent of its validity. Then follows a detailed discussion of some confusions and mistakes often found in the literature. The addressed points include the issue of temperature in the Clausius relation and closely related concepts, such as heat, reversibility and reservoir. The ideas presented in this study are primarily intended for graduate students and teachers, and may also be of interest to undergraduate students with a solid background in thermodynamics.

*Classification:* M50

*Keywords:* Clausius equality; Clausius inequality

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