

I am pleased to be corrected for my ill-chosen words concerning the Republic of Ireland, and I hope that these were not taken as any lack of appreciation for the wonderful hospitality extended to me during my visit to that beautiful, romantic country. Apparently, the economy of Ireland is stronger than the impression of it a visitor receives; however, the fact still remains that due to economic necessity many people (especially students) find it necessary to find employment elsewhere. Many countries or states throughout the world can list numerous universities, institutions, societies, libraries, and traditions which, by themselves, do not imply good organization for scientific research. However, their very existence should provide the basic environment from which a broad spectrum of knowledge, stemming from research, should flow.

In my article it was impossible for me to describe in detail the scientific activity of every European country, and for this reason I wish to thank Hearne and Wheeler for their informative letters.

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Subcool and Supercool

The recent exchange of views [*Science* 129, 1296 (1959)] between meteorologists Braham and Appleman relative to *super*- and *subcooling* intrigues me. It might be of interest that chemical process engineers, who have intimate contact with related physical phenomena, have no problem with these words. They are not used interchangeably. Each has a distinct and separate meaning.

The engineer's definition of *supercool* coincides with that of Webster: "to cool below the freezing point without solidification." For example: Liquid glycerine can be supercooled many degrees without crystal formation.

Subcool in the engineer's parlance is defined as "to cool a liquid below the equilibrium temperature at which condensation takes place." For example: The alcohol condenser in this process is designed for 20°F subcooling. In actual practice, condenser calculations are made with separate consideration of heat transfer surface "for condensation" and "for subcooling."

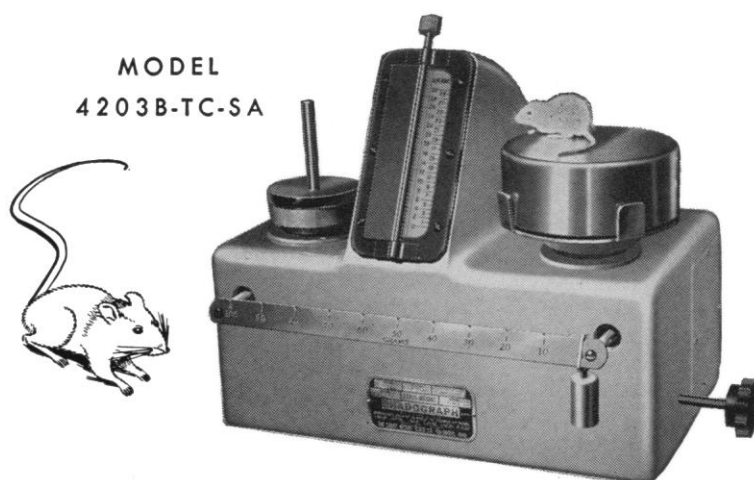
Since it appears that meteorologists have not made up their minds concerning usage of these two words, may I have the pleasure of inviting them to join with the engineers? Consistency of terms throughout the scientific fraternity is worthy of attainment.

R. E. MORRISON

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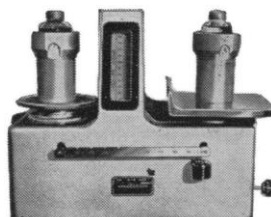
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