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Metrology

Browsing through recent issues of *Scientific American*, I came across Lord Ritchie-Calder's article summarizing Great Britain's progress in converting to the metric system [223 (1), 17 (July, 1970)]. What struck me particularly about the paper was the tabulation showing which countries now employ the metric system, which are in the process of converting, and which are still using only the English system. In the last group are Ceylon, Gambia, Guyana, Jamaica, Liberia, Malawi, Nigeria, Sierra Leone, and the United States.

The message I received appears obvious. In a relatively short time all these nations, including ours, must join the vast majority and adopt the metric system of units.

Professional societies such as the AIChE should lead the way in proposing this needed change. Within the professional society, those involved in research and development should take the initiative and employ only metric units in their publications as well as in unpublished theses, reports, and records. To adopt completely the metric system will require some adjustment. To most of us the kilogram is no stranger although few of us would readily grasp the physical feel for heat capacities in joules/kilogram-kelvin.

Recognizing the inevitable, *AIChE Journal* will require that all papers submitted after July 1, 1971 conform in notation to the SI System (Système International d'Unités). To aid authors in anticipation of this change, an abbreviated guide and a convenient conversion table are given on the last pages of this issue. The factors were obtained from the more extensive listing given in "Metric Practice Guide," ASTM E 380-70.

The short guide for the conversion of U.S. customary units to SI indicates, as is well known, that the basic SI set of units employs the kilogram, meter, second, and kelvin. The ampere is also included as a basic unit for electric current and the candela for luminous intensity; these two are not independent but are included for convenience.

To keep this editorial brief, I must forego any discussion of the fascinating story of how basic measuring units were formulated and changed to present standards. In addition to Lord Ritchie-Calder's informative paper, two other recent books in the field are Maurice Danloux-Dumesnils' "The Metric System: A Critical Study of its Principles and Practice" (Oxford University Press) and Frank Donovan's "Prepare Now for a Metric Future" (Weybright and Talley).

Just remember, the vapor pressure of water at 373.15 K is now 101.325 kN/m²!

ROBERT C. REID