

**TABLES OF THE PROPERTIES  
OF STEAM AND OTHER  
VAPORS, AND TEMPERATURE-  
ENTROPY TABLE**

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Tables of the Properties of Steam and Other Vapors, and Temperature-Entropy Table by Cecil H. Peabody

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**CECIL H. PEABODY**

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OF STEAM AND OTHER  
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TABLES OF  
THE PROPERTIES OF STEAM  
AND OTHER VAPORS  
AND  
TEMPERATURE-ENTROPY  
TABLE

BY

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## P R E F A C E.

THE Tables of the Properties of Steam were calculated twenty years ago to accompany the author's Thermodynamics of the Steam Engine; since that time important experimental investigations have been made by Callendar, Barnes, Knoblauch and Thomas. The tables have been recomputed, introducing this information and with certain changes which will be found to facilitate their use. All the tables for saturated steam have columns of entropy due to vaporization; and the table in metric units has been made into a conversion table by aid of which properties can be found in either metric or English units or a combination of the two systems may be used.

The development of the steam-turbine has given prominence to adiabatic computations for steam and has emphasized the facts that the usual methods are tedious and cannot be worked inversely. To meet this difficulty various diagrams have been devised, all of which have certain inconveniences; if they have a convenient scale, they are so large as to be awkward to carry or to use; all have important problems represented by curves which render interpolation troublesome.

To facilitate the solution of all adiabatic problems (and many others) a Temperature-Entropy Table has been constructed for saturated and superheated steam. For engineering purposes the answers for such problems may be read directly from the table; greater refinement can be had by interpolation when that is thought desirable. That part of the table which refers to saturated steam may be relied upon to give the nearest unit in the last place of significant figures; the degree of accuracy to be attributed to the several properties of saturated steam can be determined from the statements of experimental data and derivation of formulæ given in the Introduction. The properties of superheated steam are given with as much accuracy as conditions warrant. This part of the table offers solutions of problems that cannot be readily obtained otherwise.

Original data are given in the Introduction so far as possible, and computations and transformations of equations are set down at length



so that each one may decide for himself what degree of accuracy he shall attribute to the properties and methods presented.

The actual work of recomputing the Tables of Properties of Steam and of constructing the Temperature-Entropy Table has been done by Mr. Harold A. Everett, S.B., who has also read the proofs. How much that means can be appreciated by those familiar with such undertakings.

C. H. P.

SEPTEMBER, 1907.

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