

IVTANTHERMO - New Live in the Internet Era

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Electronic database directory "Thermodynamic properties of individual substances", created in the ICT Academy of Sciences Soviet researchers since the 50s of this century, at the dawn of the Soviet space program. Handbook published in 4 volumes. Each volume of the handbook "TSIV" consisted of two parts: text (with references) and a table. Subsequent studies were conducted from 1985 to 2004. in the department of chemical thermodynamics High Temperatures of the Russian Academy of Sciences. Directory and its database contains information on more than 2,000 different substances and their compounds. For each substance, available information on its isobaric heat capacity, reduced Gibbs energy, enthalpy and entropy as a function of temperature. The database is designed as a "live" calculations in Mathcad and is available in the public domain on the Internet, except for code calculations. This fact allows us to refer to the function by using Mathcad in other calculations. Researcher, engineer or student can enter the temperature (within the workspace functions) and obtain the value of the four thermodynamic properties. Also shows a plot of these functions, which the user can trace the behavior of the entire temperature range. Each calculation sheet and attached to the table from the directory. Calculations are built using mathematical modeling of polynomial dependencies. The database is complemented by similar calculations in Mathcad 15, Mathcad Prime 3, SMath and Excel. In Excel formulas on the properties of individual substances are presented in a tabular format that makes it easy to transfer their problems in programming languages BASIC, C, Pascal, Java, VBA and others.

Address resource http://twf.mpei.ac.ru/ochkov/VPU_Book_New/mas/index.html