Windows-Based Version of the Software and Database System for Reference Table Calculations

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IVTANTHERMO databank [1] created many years ago, was based on HP3000 computing system with MPE operating system and DBMS IMAGE and KSAM. More or less automated transfer of the software of the databank on modern computing systems appears impossible because of essential differences in OS and DBMS. Therefore the only way for modernization is designing and realization of completely new program system on the basis of experience and information available, algorithms of calculation and codes of applications. The present paper describes a part of this work which concerns development of a database, transfer of the information and programs of thermodynamic properties reference tables calculation.

The basic features of a database are temporality and authorization. These features are very important for joint work of the experts developing recommended thermodynamic data on the basis of all available experimental and theoretical information.

Methods of calculation of thermodynamic functions and thermochemical values are based on algorithms and programs, described in the reference book [2] and the additional methods used for calculations of recommended tables of IVTANTHERMO database [3,4].

[1] L.V. Gurvich *IVTANTHERMO data bank.* Vestnik AN SSSR, **No 3**, pp. 54-58 (1983).
[2] L.V. Gurvich, IV. Veyts, V.A. Medvedev et al., *Thermodynamic properties of individual substances.* Fourth edition. Editors: Gurvich L.V. et al., Hemisphere Publ. Corp. Begell House and CRC Press, New York, Vol I-III (1989-1994).
[3] L.V. Gurvich, V.S. Iorish et al. *IVTANTHERMO - A Thermodynamic Database and Software System for the Personal Computer. User's Guide.* CRC Press, Inc., Boca Raton, 1993.
[4] G.V. Belov, V.S. Iorish, V.S. Yungman, *IVTANTHERMO for Windows – database on thermodynamic properties and related software.* CALPHAD, v. 23, No. 2, pp. 173-180 (1999).