

Web Thermo Tables and ThermoPlan: Access to ThermoData Engine over the World Wide Web

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ThermoData Engine (TDE) represents a key component in a global information system for thermophysical and thermochemical data currently under development. TDE implements the concept of dynamic data evaluation, whereby a reliable underlying data archive is used in conjunction with an algorithmically-encoded expert analysis in order to generate up-to-date data recommendations. In order to disseminate this information, two new resources have been developed and deployed over the World Wide Web. The Web Thermo Tables (<http://wtt-pro.nist.gov> and <http://wtt-lite.nist.gov>) are subscription services that provide interactive interfaces to TDE recommendations for 32 pure-compound thermophysical and thermochemical properties. Capabilities of this resource include a dynamic window-in-window interface, dynamically calculated tabulated data sets, and graphical comparison of model recommendations with underlying experimental and predicted data sets. ThermoPlan (<http://trc.nist.gov/thermoplan>) is a freely accessible tool for evaluating the relative impact of a particular thermophysical property measurement upon the knowledge base underlying the TDE analytical engine. Both utilize the core software libraries of TDE in order to serve a particular information need. In order to provide a sufficiently responsive interface, extensive caching of evaluations is performed, where recommendations are updated regularly in order to provide recommendations that reflect the current state of knowledge in the field. Demonstrations of the capabilities of these technologies will be presented, as well as discussion of future directions for extending these capabilities.