An Application of Hydrogen Thermophysical Properties Database - All in One Live CD -

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The National Institute of Advanced Industrial Science and Technology in JAPAN has set up the "Research Center for Hydrogen Industrial Use and Storage (HYDROGENIUS)". The hydrogen thermophysical properties team of HYDROGENIUS is trying to measure the density, viscosity, speed of sound, thermal conductivity and specific heat under conditions with high pressure and high temperatures of 100 MPa and 500 C, and developing a database for hydrogen thermophysical properties, which also provides the properties estimation service.
In this research project we have created ``All in 1 CD --- Live CD style Hydrogen Thermophysical Properties Database" as an application of the developing database. As a live CD, this application makes the database and the thermophysical property estimation service available regardless of the computer environment, and with our CD the user can have accesses to the hydrogen thermophysical properties data, the data on hydrogen literature and the computer programs for prediction of hydrogen thermophysical properties. Once booted from ``All in 1 CD" with TCP/IP network connection, besides the accessibility of a single user, multiple users in the same local area network can have accesses to the thermophysical property database by using an ordinary web browser such as Internet Explorer. Once accessed, the database can also act as a calculation server which enables the users to carry out predictions of hydrogen thermophysical properties.