Process Simulation: The Need for an Advanced Thermophysical Calculation Server

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Simulis® Thermodynamics: a Thermophysical calculation server

The various available methods can be combined in order to configure a thermodynamic model adapted to a specific system.

A full set of services available:
- Data regression of experimental properties
- Graphical display of properties on temperature, pressure or composition ranges
- Generation of property tables
- Export of PSF files (HTFS), PVT files (OLGA)
- Estimation of pure component properties
- Plot of phase envelope diagrams
- Residue curves calculation & ternary diagrams
- Calculation of petroleum fractions properties
- Unit conversions
- Predictive models manager (UNIFACs, PPR78, NRTL-PR...)
- etc...

All these services become automatically available in your usual software since it embeds Simulis® Thermodynamics

Uses the widely validated thermodynamic library of ProSim:
- Maturity of the architecture
- Reliability of the results
- Robustness of algorithms

Supplied with a database of over 2 000 components including AIChE’s DIPPR® database and access to your “private” databases of pure components properties.

Other software components included:
- Simulis® Conversions: physical units conversion management tool
- Simulis® Properties: pure substances properties server

Easy to embed in your environment

Any application that integrates Simulis® Thermodynamics automatically inherits from its CAPE-OPEN standard compliance

“Expert mode” to add your own thermodynamic models (new or existing ones)

Dynamic Link Library (DLL)
VBScript

Capability to use legacy codes
End-users can introduce their own know-how within Simulis® Thermodynamics
- Ability to merge native ProSim codes and legacy codes.
- Ability to use native pure compound properties in legacy codes.
- Tests and debugging facilities supplied to developers

Thermodynamic library enriched every year

ProSimPlus, ProPhy Plus...
Aspen TASC (PSF file)

PPR78 [1 - 4]
NRTL-PR [5 - 7]
PPC-SAFT [8 - 11]

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