

INFOCHEM

COMPUTER SERVICES LTD



Capabilities

The Infochem staff are one of the most experienced groups in the world working on the application of thermodynamics and physical property models. We have a cumulative experience of over 80 man-years. Infochem's staff or colleagues are available to help in any of the following areas.

Thermodynamics and Physical Properties

- Data acquisition, analysis, fitting and estimation.
- Setting up special or customised models for oil, gas, chemicals and minerals processing.
- Solution of complex phase and chemical equilibrium problems involving solids, liquids and gases.
- Design and supply of advanced physical property software.
- Long term research and development of new engineering methods.

Petroleum Engineering

- Analysis of PVT data, setting up equation of state models.
- Gas hydrate formation and dissociation, effect of inhibitors and salinity.
- Data analysis and modelling of formation of waxes and asphaltenes.
- Analysis of distribution of trace components.
- General physical chemistry of oilfield chemicals.
- Provision of courses on PVT analysis and equation of state modelling.

Process Simulation

- Development of special unit operation models.
- Interfacing physical property and other packages to process simulators.
- Data analysis and reconciliation.
- Mathematical analysis and modelling of engineering problems.
- Implementation of numerical methods.
- Fast approximate methods for dynamic simulation.

Project Management

We can put together multi-disciplinary teams with our associates to undertake a range of projects involving:

- Flow assurance studies
- Process optimisation and process control.
- Operator training
- Environmental and safety studies.
- Vessel depressurisation and relief valve sizing.
- Reservoir engineering.
- Corrosion
- Laboratory studies including PVT testing, VLE, etc.



Software Applications

Infochem's Multiflash software used with other modelling tools produces potential cost savings and increased profitability over a range of industries.

Oil and Gas

- Early assessment of potential problems such as solid deposition which may lead to formation damage or pipeline blockage
- Choice of the best remediation strategy or most efficient maintenance schedule
- Informed decisions on the effects of co-mingling for pipeline operation and the agreement of allocation contracts
- Optimisation of production
- Avoidance of unnecessary, and possibly ad-hoc fluid data reconciliation between different packages

Chemical/Other

- Modelling and design of new and innovative products e.g. fuel cells
- High fidelity representation of fluid properties for applications such as leak detection or difficult separations of near identical components
- Optimisation of experimental procedures
- Improved process design and control
- Solvent selection

Equipment Manufacturers

- Provision of intelligent instrumentation e.g. flow meters
- Reliable and efficient equipment sizing
- Design and selection of working fluids
- Prevention of unsafe or unfavourable operating conditions e.g. dew point control

Software Vendors

Access to

- Structure, well documented and robust code
- Wide variety of industry standard models
- Full range of flash algorithms
- Analytical derivatives for dynamic simulation
- Supported and documented industry standard interfaces

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