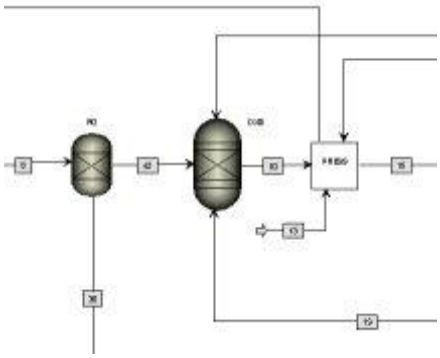
PRODUCT DESCRIPTION

OLI Engine in UniSim Design™



UniSim Design OLI is a joint product of Honeywell and OLI Systems. It combines the OLI Alliance Engine with all the existing features of UniSim design. The result: clients may specify the OLI thermophysical property framework as a property package with the UniSim Design flowsheet simulation environment.

Both OLI models, AQ and MSE, are available as property methods.

When there is water or electrolyte streams in a process, using OLI for simulation of these units, or for a section of the flowsheet, allows predictive and electrolyte simulations within a more traditional flowsheet environment.

FEATURES

• Electrolytes OLI Property Package	Built on OLI's thermophysical property framework and available in UniSim Design along with all other fluid packages.
• Electrolytes Component Database	Access to the complete OLI component databases for both the AQ- and MSE-based systems in addition to UniSim Design's traditional databases
• Electrolyte Properties	Calculation and display of thermodynamic and transport properties specific to electrolyte systems such as pH, osmotic pressure, ionic strength and electrical conductivity.
• Unit Operations	In addition to the UniSim Design range of unit operations, UniSim Design OLI has three additional electrolyte operations: Precipitator, Crystallizer, & Neutralizer.
• Electrolyte Column	OLI's column program for solving electrolyte towers.

LINK TO CORROSION ANALYZER

One special feature of UniSim Design OLI: clients can launch the OLI Corrosion Analyzer from within the UniSim Design environment. This feature allows process engineers to pro-actively address the question "how corrosive is this stream for the material being used?"

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UniSim Design™ OLI

APPLICATIONS

- pH control
- Trace metal removal
- Brine handling
- Produced water management
- Regulatory and environmental limits
- Amines
- Sour gas
- Gas sweetening
- Waste water treatment
- Chlor-alkali brines
- Acid stream neutralization
- Solids deposition
- Organic acid removal in brines
- Scrubbers
- Caustic wash tower
- Foul feed stripper
- Multi-effect evaporator

CAPABILITIES

UniSim™ OLI is built on OLI's time-proven approach to electrolyte systems.

• Complete speciation	The OLI model predicts and considers all of the true species in solution in the range of -50 to 300^{o} C, 0 to 1500 bar, and 0 to 30 molal ionic strength and under the MSE option without limit on concentration.
• Robust standard state framework	Based on the Helgeson equation of state, parameter regression and proprietary estimation techniques for the aqueous framework and on OLI technologies for the MSE framework.
• Activity coefficients for complex, high ionic strength systems.	For the aqueous framework, based on the combined work of Bromley, Zemaitis, Meissner, Pitzer and OLI technologists. For MSE, based upon OLI development, published, and peer-reviewed.
• Comprehensive databanks	The complete OLI databank with coverage for the electrolyte chemistry of 80 elements and thousands of organics. Data service provides customized coverage of client chemistry in the form of private databanks.
• Thermophysical properties	OLI has developed unique chemical /physical based models to compute thermodynamic and transport properties for complex electrolyte mixtures.

RELATED PRODUCTS

Stream Analyzer: in-depth chemistry studies of your electrolyte chemistry
Corrosion Analyzer: the electrochemistry of aqueous corrosion

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