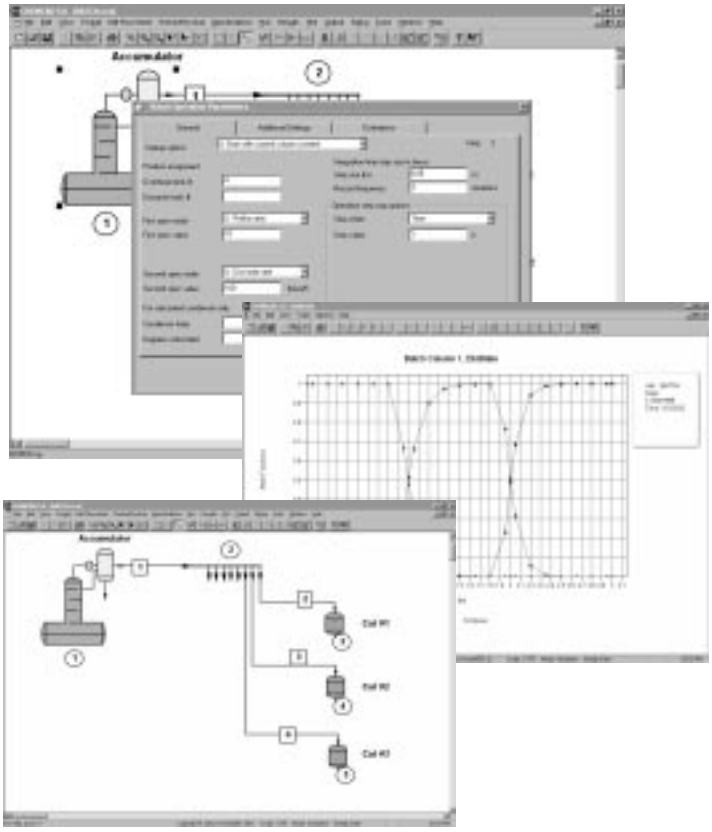
CC-Batch

The only software to trust for your batch distillation processes.

Batch Distillation Software

WHY SHOULD YOU USE CC-BATCH?

- Short learning curve and very little re-learning required
- Unique interface allows intuitive set up of your batch distillation process
- Batch distillation processes may be integrated into CHEMCAD flowsheets
- Rigorous use of built-in thermodynamic models and thermophysical property data
- Flexible flowsheet set up and operational procedures allows most any batch distillation process to be simulated



HOW DO YOU ACTUALLY USE CC-BATCH?

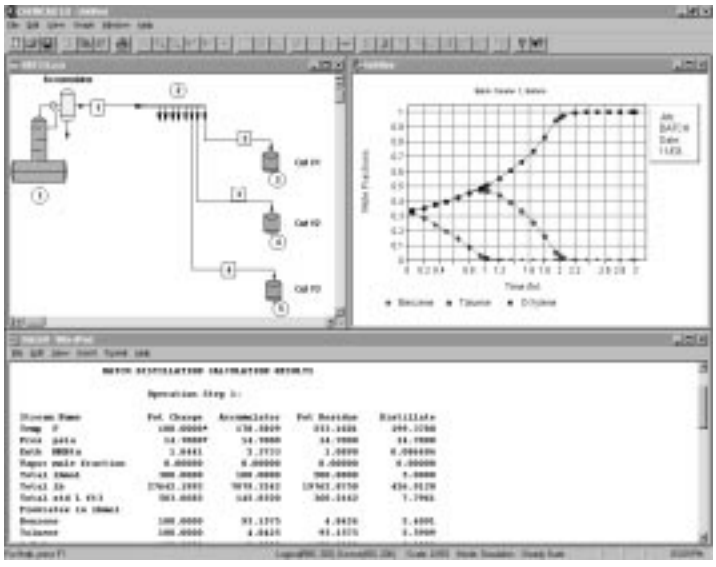
- Draw your flowsheet
- Choose your chemical components
- Choose your thermodynamic model
- Specify the column/charge/additional feeds
- Define the operational procedures
- Run the calculations
- Generate the plots and reports

WHAT ARE SOME COMMON APPLICATIONS OF CC-BATCH?

- Model existing batch column equipment
- Explore alternative processes for existing products
- Design new equipment
- Validate thermodynamic using laboratory batch column equipment
- Predict minimum boiling ternary azeotropes quickly

WHY SHOULD YOU CONSIDER CHEMSTATIONS?

- Chemstations' mission is to provide the chemical processing industry increased profitability, productivity, and safety via powerful, easy to use engineering software.
- Chemstations' development team is dedicated to creating the best available products through continuous improvement.
- Chemstations' technical support team is willing to stand behind our products and help you achieve your goals.
- Chemstations' global sales and marketing team is positioned to develop long term partnerships by creating opportunities through process solutions.
- Over 400 leading chemical companies have selected CHEMCAD as their primary process simulation software tool, with approximately 90 percent of Chemstations' customers renewing their maintenance agreement year after year.



Chemstations™

CC-Batch

GENERAL FEATURES

- Graphical user interface
- Customized reports and PFDs
- Interactive operation
- Users may add their own thermo-dynamics, components, and/or graphics symbols
- Online help
- Extensive data checking
- Graphical plotting of results
- Online, real-time display of results during calculation
- Calculation interrupt
- Integration into CHEMCAD flowsheets
- Flexible engineering units

THERMODYNAMICS' GENERAL FEATURES

- Vapor phase association
- Vapor-liquid and liquid-liquid equilibrium
- Physical properties estimation of undefined components

K-VALUE OPTIONS

- Hydrocarbons: Peng-Robinson, Soave-Redlich-Kwong. API SRK, Grayson-Streed, Maxwell-Bonnell, BWRS, K-Charts, Regular Solution
- Chemicals: NRTL, UNIQUAC, Wilson, UNIFAC, Margules, Van Laar, Chien-Null, 4-parameter equation of state
- Polymers: UNIFAC for polymers, Flory-Huggins
- Special Systems: amines, sour water, methanol, ethane-ethylene, propane-propylene, partial-pressure (ionic)
- Others: Henry's Gas Law, vapor pressure, User K-tables
- Polynomial K-values, user subroutine
- Equation of state for Hydrogen-bonding compounds

ENTHALPIES

- Hydrocarbon and Petrochemical: BWRS, Peng-Robinson, SRK, API SRK, Redlich-Kwong, Lee-Kessler
- Chemicals: Latent heat, integral heat of solution
- Water: Steam tables
- Other: amines, polynomial, H tables, user subroutine, mass balance only

REGRESSION

- Pure component physical properties regression
- Multiple component VLE and LLE regression
- Regression from UNIFAC
- Regression from infinite dilution data
- Regression of electrolyte data

ENGINEERING DATA

- Physical properties databank for pure components
- BIP database for activity coefficient equations
- Electrolytes database
- Vapor phase association databank
- Interface to corporate databases

ELECTROLYTES

- Pitzer and MNRTL methods for strong and weak electrolyte solutions, including the addition of temperature dependent interaction parameters
- Binary and ternary interaction parameters database.
- Electrolyte reaction equilibrium database; calculated from Gibbs

COLUMN FEATURES

- Any number of operating steps
- Up to 100 stages
- Reservoir feeds
- Side product accumulators
- Stage heaters and coolers
- Calculation of ambient heat loss
- Stage and condenser hold-ups
- Choice of convergence algorithms

OPERATING STEP(S) OPTIONS

- Start-up from total reflux or from fixed liquid on all stages
- Operating step specifications may include a variety of specifications for the distillate, boil-up, reflux, condenser, and heat duties.
- Dump accumulators at any time
- Add materials at any time
- Stop criterion may be based on the accumulator, distillate, residual charge, or time
- User-defined pressure profile (linear or non-linear)
- Alternate stop criteria permitted

HARDWARE REQUIREMENTS

- Windows 95, 98, and NT
- Math Co-Processor
- Optional:
  Printer
  Plotter
- Network version available

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