Aspen HYSYS® Petroleum Refining

Improve refinery simulation modeling to drive increased profitability

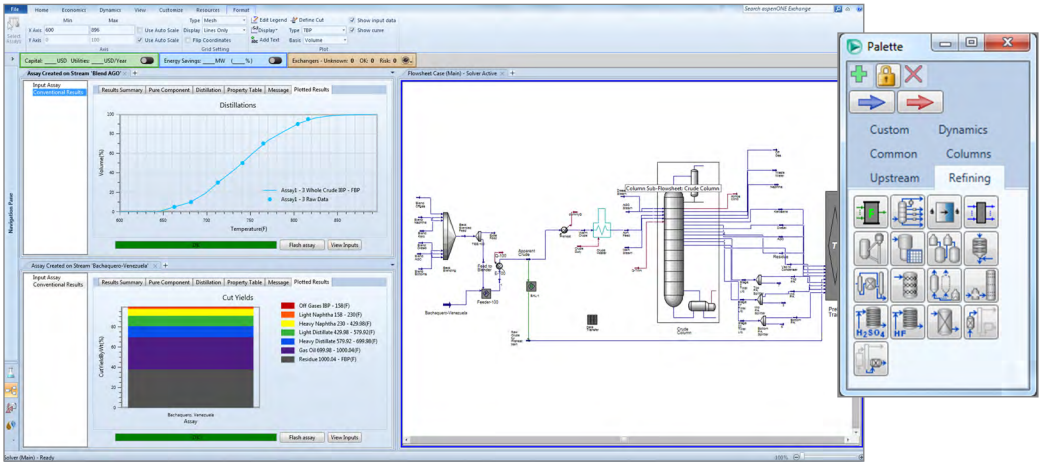
Aspen HYSYS Petroleum Refining layers powerful features onto the Aspen HYSYS process simulator to simplify and improve petroleum refining simulations. Streams are driven with crude assays that support an extensive set of stream petroleum properties. Complex, multi-unit simulations can be quickly configured using the complete suite of major reactor units and associated fractionation units.

Key Benefits

- Better crude feedstock selection in planning models
- Improve operations with more accurate planning and scheduling models
- Operability studies to confirm the feasibility, safety and reliability of potential crude blends
- Improve unit profitability with engineering studies (e.g., cut point optimization, catalyst selection, heat exchanger monitoring)
- Improve refinery profit margins by analyzing multi-unit process models

Advanced Simulation Improves the Decision-Making Process

Refinery operators are challenged with making complex business decisions that play a key role in determining the profitability of operations. Tools that can ensure the best decisions are being made to provide significant value and contribute to the success of refining operations. Aspen HYSYS Petroleum Refining allows the simulation of multi-unit flowsheets based on easy-to-manage component lists, resulting in faster and more accurate predictions. Moreover, the propagation of petroleum properties throughout the flowsheet enables accurate analysis of the end product value. With these capabilities refiners can improve planning and scheduling models, analyze refinery profit margins, enable operations decision support, and perform multi-unit engineering studies. Together, these applications allow accurate decisions to be made more frequently thus improving refinery profits.



Aspen HYSYS Petroleum Refining provides users with simplified and rigorous unit operations in the palette featured above to manage model complexity.

Key Technical Features

- Improved assay management drives stream compositions and properties with improved crude characterization from assay data. Crude assay data can be easily entered into Aspen HYSYS Petroleum Refining, imported from Aspen PIMS for consistency between planning and engineering, or imported from third-party sources.
- Access an extensive library of over 600 assays and analyze over 140 petroleum properties including specific gravity, viscosity, contaminants, cold properties and more.
- The complete set of all major refinery reactor models are available using familiar Aspen HYSYS interfaces for calibration and integration into larger flowsheets. Refinery reactor models include FCC, hydrocracking, hydrotreating, naphtha reforming, isomerization, alkylation, delayed coking and visbreaking.
- Includes stream data and unit operations models for distillation, reaction, and blending, greatly simplifying complex flowsheets.
- Contains both rigorous and simplified unit models to manage the complexity of refinery-wide flowsheets.
- Provides the data required for support of planning and scheduling models.

Added Value of Integration

Aspen HYSYS Petroleum Refining is tightly integrated with other aspenONE® Engineering solutions, including Aspen HYSYS, Aspen Shell & Tube Exchanger, Aspen Capital Cost Estimator, Aspen Energy Analyzer, and Aspen Simulation Workbook™. Additionally, Aspen HYSYS Petroleum Refining maintains the open-architecture of Aspen HYSYS and allows third-party technology to be employed using Aspen Simulation Workbook or the Aspen HYSYS extension feature.

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