

DATASHEET

AVEVATM Production Accounting

Resolve data inaccuracy on flow measurements and entry data on oil movement, with the ultimate goal of balancing a plant's inputs with its outputs.

Categorize discrepancies and reconcile them so that process engineers and yield accountants are using the best possible set of data to balance the plant allowing them to identify and account for any true loss.

Balance mass and/or volume using raw flow measurements and other sources of data, such as oil movement or laboratory data. It mathematically detects missing movements or gross errors and automatically eliminates the problems before generating an optimal set of reconciled data.

Robust and Accurate Data Reconciliation

The nature of measured data means that there will always be slight inaccuracies and disagreements between measured values in a plant. In some cases, however, the data may truly be incorrect. Knowing when to accept slight inaccuracies and when to reject and take action on a true measurement error is important to both process engineers and production accountants. When discrepancies are within tolerable limits, it is also important to be able to apportion them to the various streams within the plant.

Besides of the complexity of the oil refinery processes, finding errors manually is impractical. Maintaining reliable oil movement data has traditionally been costly and time-consuming, so many companies do not spend enough time to question and validate daily production data, to their own financial detriment. AVEVA Production Accounting streamlines the process sufficiently that companies who use it find they are producing much more accurate balance reports.

AVEVA's solution provides an advanced form of Graphical User Interface to present the complex process model, key performance indicators (KPIs) and other results dashboards. It presents a set of reconciled data for production accounting and performance monitoring purposes.

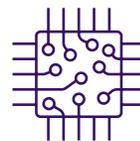
AVEVA Production Accounting performs data reconciliation using a rigorous mathematical approach based on the sparse matrix method that uses all available measurement data and takes full advantage of the power of measurement redundancy. It takes only seconds to solve thousands of flows. It also has the ability to track feedstocks and products, as well as components.

Business Benefits



Improve decision making process

Have confidence in your production data and focus on the area and variable where imbalance occur and quickly respond to turn errors into profitability.



Improve measurement system performance

Determine if instruments performance is appropriate and detect instrumentation that requires maintenance or periodic calibration.



Flexible data collection process

Quickly configure a method of accessing the required plant data, including process data, movement data, and LIMS data.



Improve control of losses

Locate and quantify losses by comparing fiscal and engineering data.

High-Level Features

Mass and Volume Balance

The Mass and Volume Balance feature enables you to reconcile mass and volume simultaneously, using different tolerances for each.

Automatic gross error detection

Find and exclude erroneous meters before balancing, ensuring useful results on the first run. Mechanization of the process of detecting and removing faulty measurements also ensures that results are consistent regardless of who is operating the software.

Intuitive graphical user interface

Provide a comprehensive object-oriented graphical user interface (GUI) with drag-and-drop functionality for building and viewing your plant model.

Modular plant modeling

Permit you to break a graphical picture of your plant into multiple screens that are interconnected and balanced as one model.

Validated stream categorization

During the plant reconciliation the streams are analyzed and validated for inclusion within the finalized reconciled data. The streams are then color-coded within the model for quick identification of problem areas.

Composition Tracking

Follow feedstocks such as Crude or Naphtha through the plant to the process unit. It also provides automatic movement detection and is fully integrated with data reconciliation. Using Composition Tracking, you can accurately track tank compositions as they change and know the composition of your flowing materials.

Smart Constraints

Incorporate “Smart Constraints”, which let you add constraints that force your balance to respect overall mass balance as well as component/enthalpy balances and stoichiometric relationships.

Automatic movement detection

Use tank level changes to infer movements between tanks, eliminating the need for tank movement data entry.

Flexible period definition

Permit you to define your period length and end time. The usual setting is one day, midnight to midnight, but this is fully customizable.

Data Access and inclusive third-party support

Multi-user access built-in support for the most popular real-time data historians.

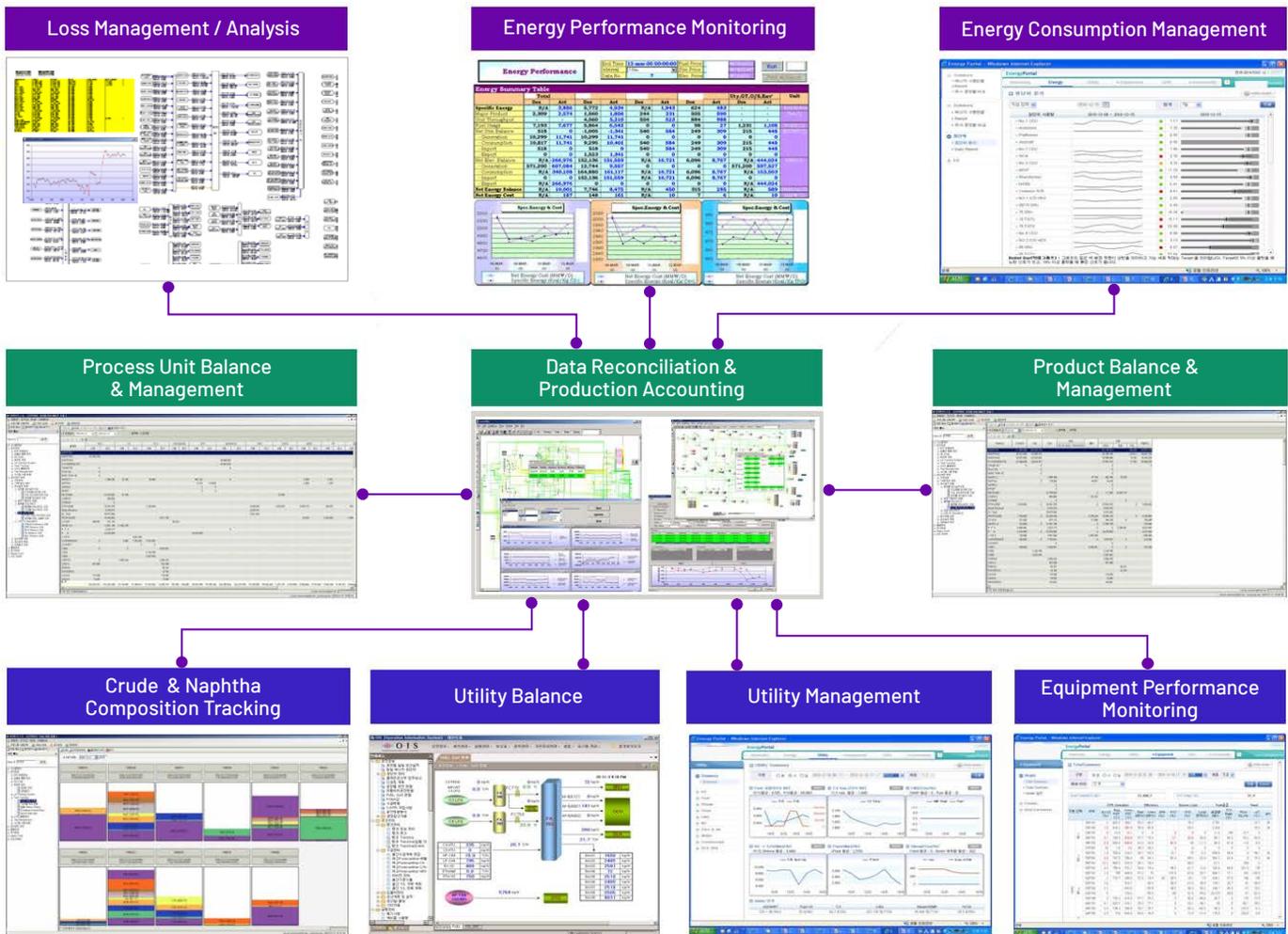


Trust AVEVA Production Accounting to Drive Data Reconciliation

Using AVEVA Production Accounting, plant-wide and process material balance can be performed and shared by departments, forming the basis for monthly material and financial balances.

Process engineers and Yield accountants can trust reconciled process data and take action on a true measurement error based on discrepancies tolerable limits.

Data reconciliation highly improves production management, energy management, inventory management, loss management and meter accuracy control.

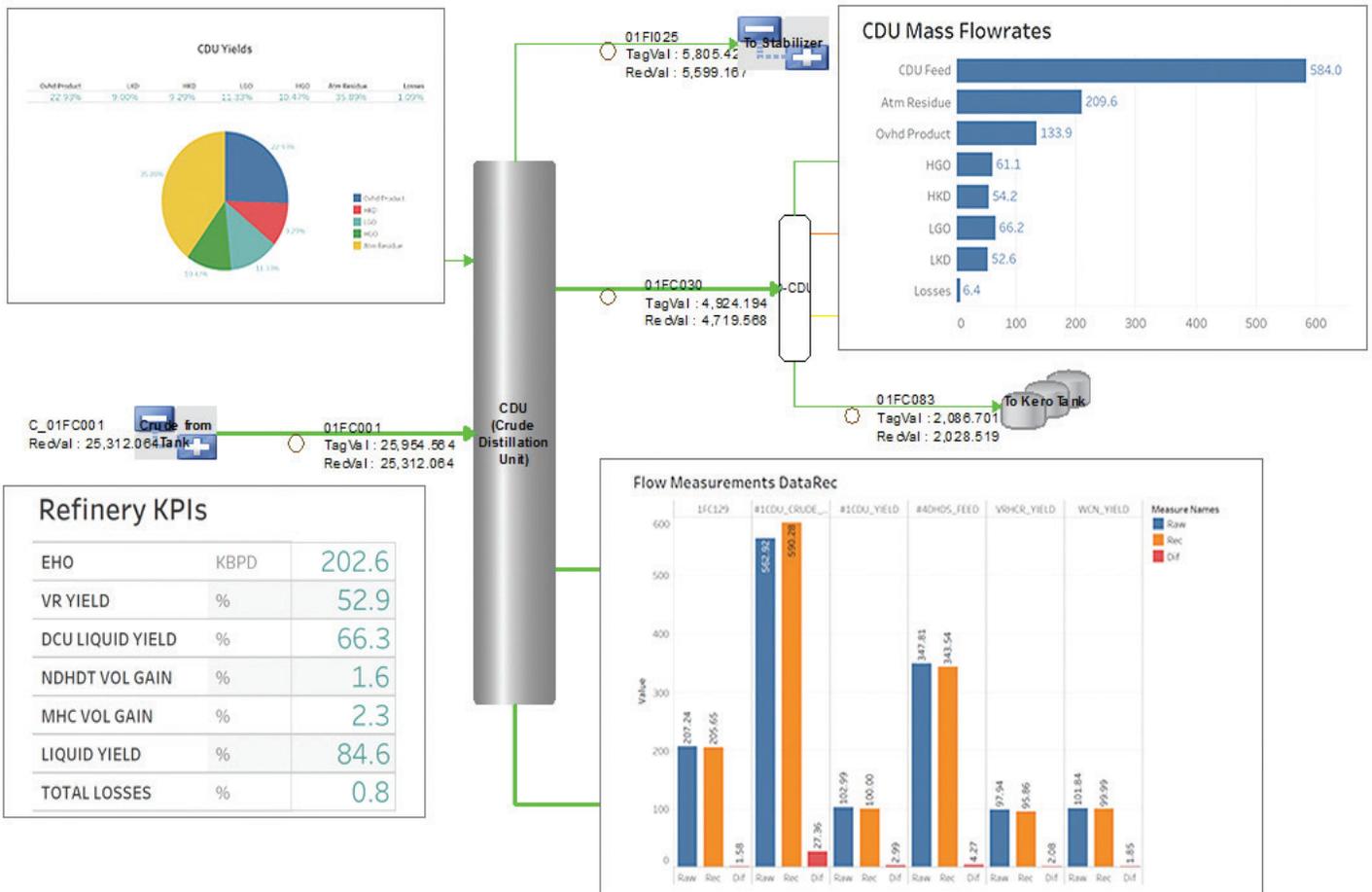


Model Configuration & Calculation Engine

Improved Visualization and Analytics

AVEVA Production Accounting automates the extraction, transformation and storage of operational KPIs, metrics and related contextual information across multiple data sources. Delivering user-friendly analytics and dashboard-based monitoring of metrics enables decision makers across the organization to make informed assessments quickly and confidently.

It provides an increased level of visualization and the ability to gain new insights by viewing metrics information in an extended context.



For more information please visit:

sw.aveva.com/operate-and-optimise/optimise-operations/error-solver-yield-accounting