The Schneider Electric Yield Accounting Solution provides refining and petrochemical companies improved material accounting of their raw material, inventory and products. This improved accounting reduces unaccounted and real losses, and identifies faulty instruments resulting in an improved bottom line.

software.schneider-electric.com/simsci
Plants Need to Account for Material

Leading refining and petrochemical companies world-wide require continuously tighter control over material losses. However, there are numerous factors preventing accurate accounting of the material in a plant.

Typical problems include:

- Time constraints on data collection and analysis
- Inaccurate/erroneous measurements
- Duplicate information that may or may not be consistent
- Comingled ownership of processed materials
- Environmental (HSE) pressure to report yields and losses
- Joint Venture (JV) pressure to report transactions

The Schneider Electric Solution

Schneider Electric’s Yield Accounting Solution provides an improved material, yield, and unit cost management system that complies with best practices for data reconciliation and production accounting. Schneider Electric’s Yield Accounting Solution also has the option to integrate directly with our Off-site products to streamline and improve the quality of data acquisition.
Hydrocarbon Processing
Yield Accounting Solution

Integration with Off-sites
One of the key differentiators of Schneider Electric’s Yield Accounting Solution is integration with our existing Off-sites Tank Inventory and Movement solutions. This allows data that was normally inputted manually to be automatically transferred into the Yield Accounting Software for reconciliation.

Tank Inventory System
TIS provides a uniform approach for managing tank inventory information and a single-window interface to all major gauging systems (e.g., Varec, Saab, LandJ, Enraf). TIS calculates, displays, and historically archives all level, volume, temperature, quality, operating state, and alarm data related to a tank and its contents. TIS provides information to the operator to safely operate the tank, and to all other Off-sites Software Suite modules and external operational and decision support systems.

Order and Movement Manager
The OMM system provides a convenient and consistent tool for the translation of business orders into process movements to be executed by the operations staff. Orders can be downloaded electronically or manually entered and broken down into discrete movements.

Schneider Electric’s Partnership for Yield Accounting
Schneider Electric has entered into a partnership with MESEnter, a South Korean company, that produces Yield Accounting software called ErrorSolver. ErrorSolver has been proven and tested by major producers in the hydrocarbon industry since 2005, replacing competitive products across South Korea. ErrorSolver has an intuitive graphical user interface and provides integration capabilities to Wonderware® Historian, PI and other modern process databases using industry standard protocols. ErrorSolver has the added benefit of seamless integration with Schneider Electric’s Tank Inventory movement management applications. Whether sold separately, or bundled with Off-sites software, ErrorSolver is competitively priced and can offer significant savings over the competition.

Business Value
A typical refinery could see benefits of $8.5 Million dollars per year from an accurate accounting of their material.

• Improve work efficiency
• Reconcile and validate data
• Identify and correct faulty metering
Hydrocarbon Processing

Yield Accounting Solution

ErrorSolver Highlights

ErrorSolver provides a graphical flowsheet environment for creating and maintain the plant balance models. It is user friendly and allows easy navigation from area to area and easy, intuitive screens from managing data connections, reconciliation steps, model configuration and more. Some of ErrorSolver's highlights are:

- Validates model integrity prior to reconciliation
- Detects and removes missing movements and faulty measurements before the data reconciliation process
- Performs data reconciliation with gross error detection for optimal reconciled values
- Performs data reconciliation with both mass and volume balances simultaneously
- Permits the user to configure “sanity check” thresholds to prevent inappropriate distribution of large losses and gains
- Permits configuration of composition and enthalpy balances across model nodes
- Permits user governance over measurement tolerances, weighting, and reconciliation options
- Retains history of model configuration along with reconciliation results
- Provides Excel and Web-based reporting

ErrorSolver models are typically configured for the entire plant complex including receipts, feed inventories, product inventories and shipments. ErrorSolver can also be configured to perform reconciliation around smaller areas of the plant such as compressors, pumps, exchangers, tanks or groupings of process equipment.

ErrorSolver provides comprehensive data reconciliation functionality that will ensure an accurate accounting of material transactions in the plant.