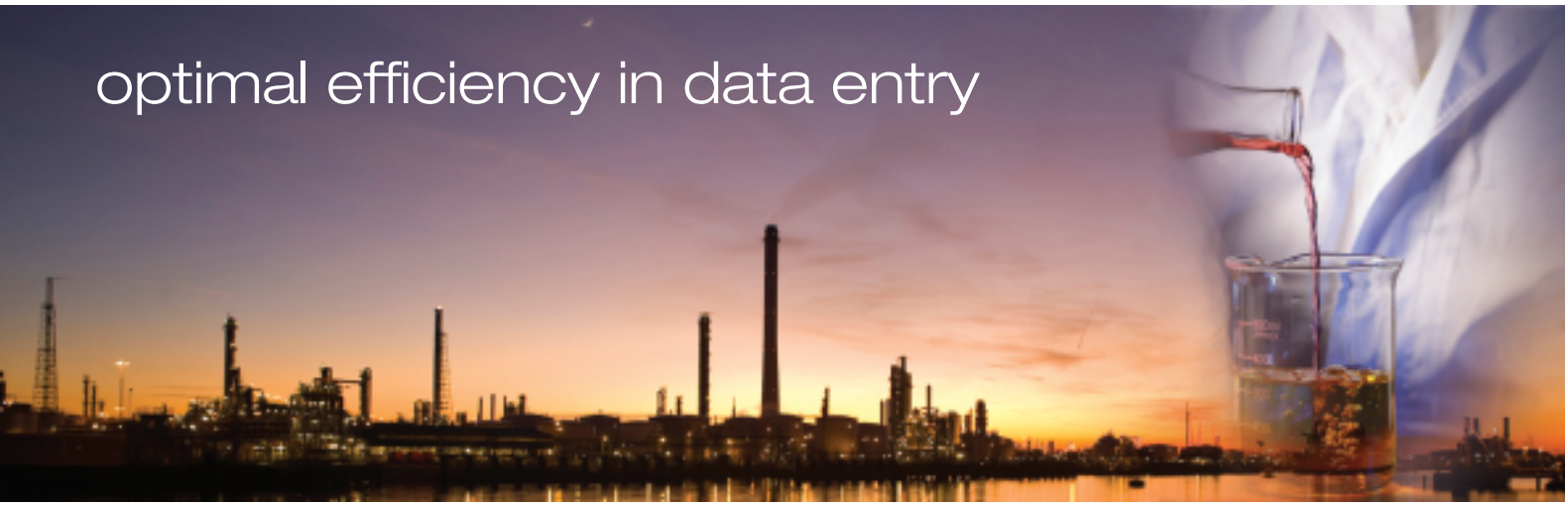
LABWORKS processLIMS™



Problem

Refining margins have dropped recently yet refineries continue to face challenges in handling heavy and sour crude and meeting tighter environmental and safety regulations.

- Every day hundreds of samples are typically analyzed by the laboratory with 10 or more values typically being measured for each sample.
- The information captured by the laboratory is of enormous value in operating the plant. For example, the laboratory might determine that the octane rating is higher than required, making it possible to reduce the amount of costly active ingredients.
- In many refineries data is still entered manually, which takes up the valuable time of analysts and creates a substantial time lag for the availability of laboratory data.
- Additional delays are generated by the fact that the laboratory systems and manufacturing systems operate as two separate islands of automation in most refineries

Approach

Purchase a Laboratory Information Management System (LIMS) that interfaces with the Plant Information Management System (PIMS.) Also implement interfaces with laboratory instruments such as PerkinElmer's Clarus GC and Series 200 LC Systems, or other 3rd party hardware offerings.

Recommendations

Select PerkinElmer LABWORKS to replace legacy laboratory data management systems in order to increase the organization's productivity and data quality.

- Assess the current data systems capability in terms of connectivity, productivity and quality
- Partner with PerkinElmer LABWORKS. With over 20 years of experience providing successful LIMS implementations in petrochemical refineries, LABWORKS has well established partnerships with leading petroleum refining industry operational software as well as project management/project implementation solutions providers
- Implement systems integration to effectively increase organizational productivity and data quality

Partner with LABWORKS to increase productivity and data quality.

Results

Increased productivity and quality through seamless systems integration

- LIMS technology reduces record keeping and eliminates most of the paperwork that analysts currently have to perform:
  - The software automatically generates barcode labels for each of the tests required for every batch of raw and intermediate material and finished product
  - Analyst scans the label to enter all of the information required
  - The analyst simply operates the instrument and the test results are automatically saved in the LIMS. The results are automatically routed to any required approvers
  - Then, the results automatically move through an interface to the plant operations software where they are immediately available
  - A slide show can be established that rotates between control points and shows the most recent data in graphical form
  - The ability to base analyses that run the plant on near real-time data can provide substantial incremental revenue gains and cost savings
- In a typical refinery application, managers estimate the installation of LABWORKS LIMS and its integration with the company ERP could save millions of dollars:
  - The interface between the laboratory instruments and the LIMS saves time and improves accuracy by automating the process of transferring results from the various instruments to the LIMS
  - Calculations are performed and statistical results carried out and the results are returned to LABWORKS
  - Custom reports and Certificates of Analysis are automatically generated and can be accessed over the refinery's intranet
  - The LABWORKS Chemical Inventory module helps avoid downtime by tracking purchases and consumption of chemicals and providing notification whenever an item drops below a predetermined level
  - The integration between LABWORKS and an ERP system helps the refinery operate closer to the spec, reducing its usage of active ingredients by possibly thousands of dollars per hour

Partner Solutions

LABWORKS™ provides software and services to effectively bridge the gap between the laboratory and operations. Partnerships with key industry applications take management of laboraotry data to a new level.

- LABWORKS integrates with AspenTech's Aspen-1™ Manufacturing Suite solution. The data transfer process can be set to run as frequently as needed, providing near-real time availability of information to the Manufacturing Suite
- LABWORKS integrates with the OSIsoft PI System™ enterprise historian which is used by process industries to safeguard data and deliver enterprise-wide visibility
- LABWORKS integrates with Honeywell Uniformance® PHD which provides a rich, flexible environment for the collection, storage, and analysis of process data
- LABWORKS integrates with SAP® R/3® to capture the tests that are required for current production, so that samples can automatically be logged in. When the tests are completed, the SAP® interface automatically sends the results back to SAP® for easy access by manufacturing and can also automatically distribute them. The SAP® interface automatically keeps track of product shipments and generates a certificate of analysis with the exact information required by each customer

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