





Implementation of Ensō-LIMS at NABL certified Indian Pollution Control Board Lab



CASE STUDY

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1. Project Details

The Vazir Sultan Tobacco Company Limited was incorporated on 10th November, 1930, under the Hyderabad Companies Act No. IV of 1320 Fasli and now governed under the Companies Act, 1956/2013. The name of the Company was subsequently changed to VST Industries Limited on 30th April, 1983. The Company has its Registered Office at Azamabad, Hyderabad.

The Company has a manufacturing facility at Hyderabad and Toopran (Telangana) and its principal activities are manufacture & sale of cigarettes and unmanufactured tobacco.

VST Industries Limited is a NABL accredited Laboratory following ISO/IEC 17025 regulatory compliance. VST was looking for Laboratory Information System and enquired for the same in the year 2018. After some evaluation process and studying the requirement of VST to established Laboratory information management system for Tobacco testing and cigarettes manufacturing industry. Our team suggested a fully configurable and scalable system meeting VST objectives i.e. real time Sample Management for multiple location, managing reporting for different sites and automating manual process of Laboratory by LIMS software.



2. Scope of Work

VST wants to increase the operational efficiency of the laboratory by implementing an automating Laboratory information management system for its Cigarettes manufacturing plant. ENSOLIMS covers the journey of a sample from its induction into a laboratory till the end of its life cycle, including the stages of Sample Storage, Testing, Reporting and Archiving. As a sample is introduced into a lab, the LIMS operation starts by accessioning the sample on to the system and assigning it with a particular identification number. As and when the samples move through the laboratory, the related information can then be updated in ENSOLIMS system to maintain the audit trail.

Key objective of LIMS for VST Cigarette manufacturing plant are:-

- To integrated VST Sample registration from multiple locations.
- Improved quality control laboratory workflows
- To automate all manual operations of Laboratory by digital platform.
- To improve the Sample management process for Raw Material Testing.
- To enhance quality and cost-effectiveness.
- To enhance tests such as Smoke analysis, Visual inspection and Physical characteristic.

3. Challenges

VST wanted a <u>Laboratory Information Management System</u> (LIMS) that can meet the following requirements:

- To integrate multiple sites for sample registration and reporting to manufacturing plant.
- To carryout monitoring of R&D operation in the Laboratory.
- System needs to handle a wide variety of testing parameter.
- Supporting services for various departments with regard to sampling, analysis and reporting.
- Huge amount of technical data from multiple project location to be acquired and processed.



- Maintaining a complete Chain of Custody (CoC) of samples, right from the samples registration to their final disposal, ensuring complete sample traceability at all times.
- Work assignment and tracking was extremely difficult resulting in effort and cost over-runs
- Manual data acquisition and calculations led to human errors in reports.

4. Solution

Assessment of business process led to the idea of web-based integrated system that will cover:

- Sample Management for multiple locations
- Barcode generation
- R&D data processing
- Task management
- Test data processing & Reporting
- Invoice generation
- Automatic Calculation
- Maintenance & Calibration Management
- Inventory Management
- Secured access to remote branches through VPN

5. Outcome Benefits

After implementation, ENSOLIMS efficiently manages the testing of batch processes of VST ensuring that products meet defined specifications and safety requirements critical to their organization's success.

ENSOLIMS manufacturing solution allows VST to monitor both batch and continuous manufacturing processes while streamlining procedures and improving automation. It helps them to manage both QC/QC and R&D process in the Laboratory. LIMS real time monitoring helps tracking and managing samples from different location to the manufacturing plant. LIMS in the laboratory, or in storage, automating testing, configuring electronic signatures for the desired laboratory activities and



management, maintaining an automated audit trail to meet the auditing requirements, and generating desired customized reports for manufacturing industry. Hence, as desired VST Industries Limited has received a fully configurable and scalable system meeting regulatory compliance of **ISO/IEC 17025**.



"ENSOLIMS optimize our operations throughout the entire manufacturing lifecycle and provides efficient test result through high-quality products to market faster."