



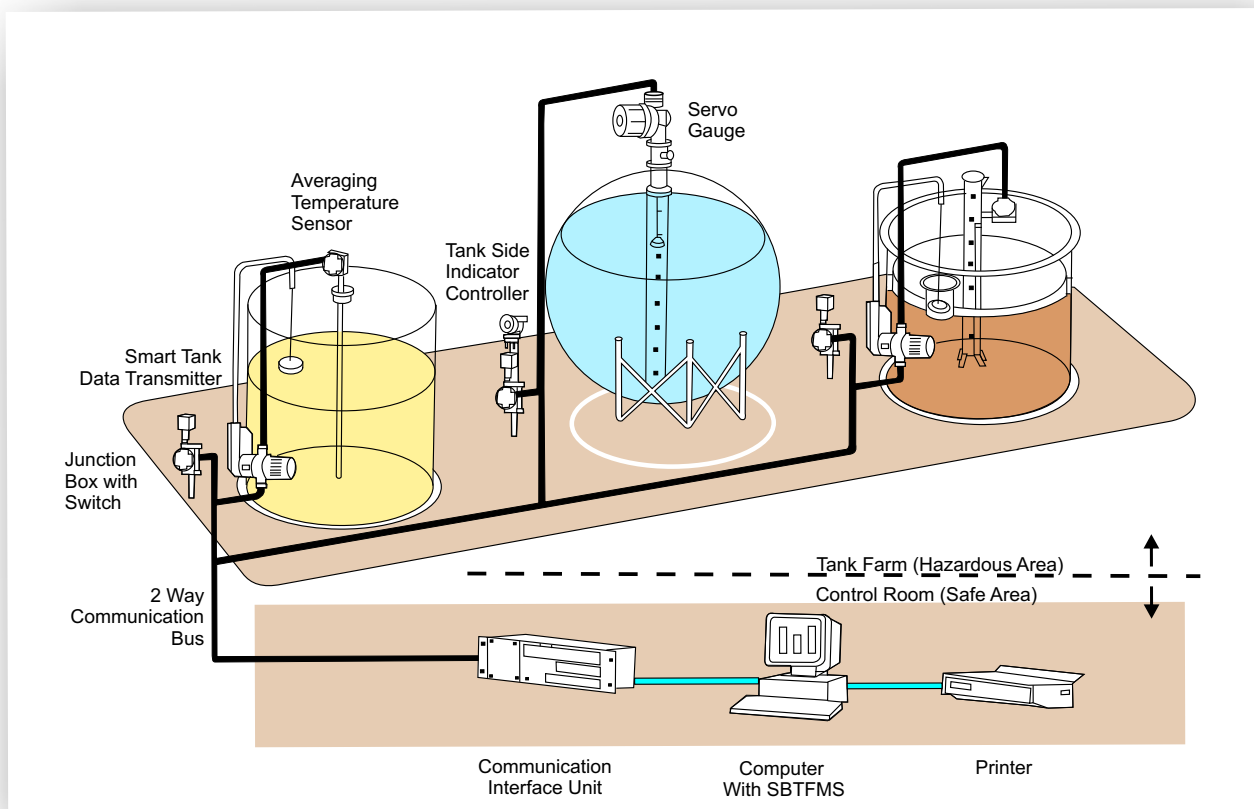
Tank Farm Management Systems

SBTFMS

Tank Farm management System software package is a powerful and versatile inventory management programme for bulk storage tanks for refineries and marketing of petroleum products. The versatility lies in the options provided to cater to the various methods of inventory calculations followed by different oil companies. Very high accuracies in volumetric inventories are obtainable. The package provides four level password protection for security of vital system data e.g. Tank data, daily logged data etc.

Tank Farm Management Software is a very cost-effective tool for product storage and despatch within refineries and tank farms. It is capable of communication with Terminal Automation System as well as ERP systems.

TYPICAL TANK INVENTORY MANAGEMENT SYSTEM



The SBTFMS software runs on any computer and interface with a CIU to Acquire level, interface level, density and temperature information from all tanks equipped with

(A) Automatic Tank Level Gauge + Transmitter (133) + Temperature sensor + Pressure Transmitter (optional)

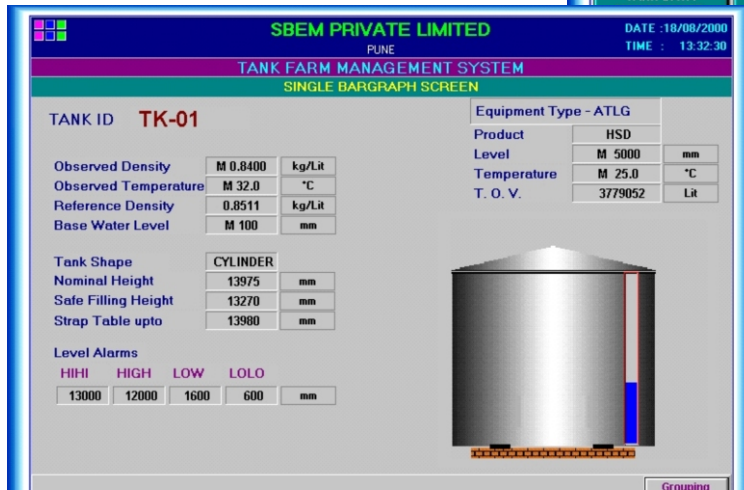
(B) Servo Gauge (139 M) + Temperature sensor + Pressure Transmitter (optional)

The package serves any combination of above instruments fitted on any type of tank and having different inventory (by volume or by mass) accuracy figures putting complete information of your tank farm at your fingertips.

FEATURES

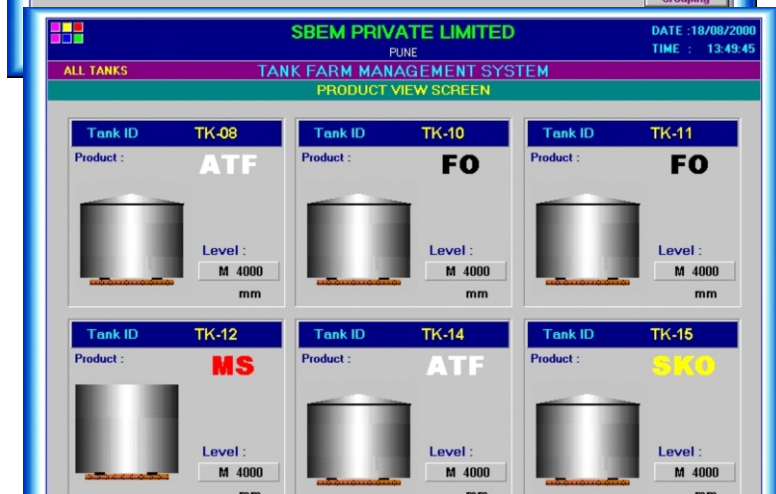
Real time tank gauging data

Displays all tank gauging data such as level, temperature, water interface and pressure. The volume and mass for inventory and custody transfer tanks are automatically calculated. This will maximize the plant effectiveness, increase productivity, and reduce costs. The operator will be able to respond faster to changing tank farm conditions.



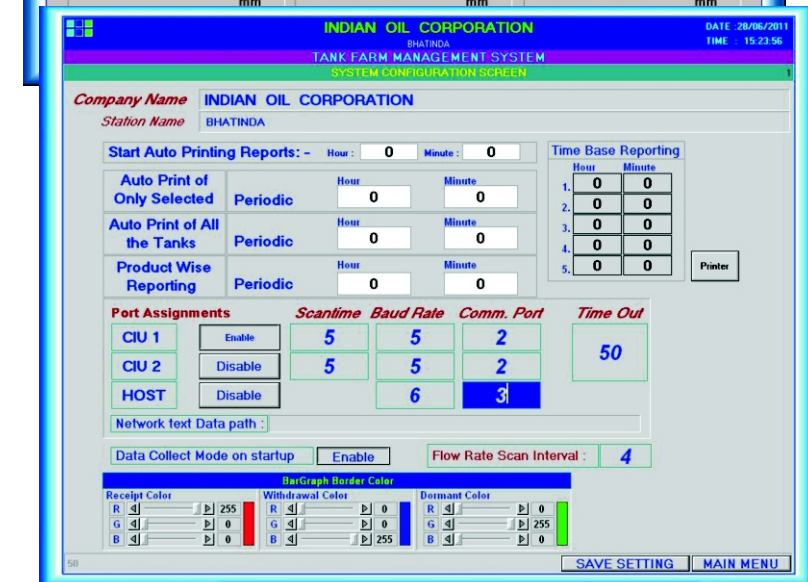
Real time inventory calculations

SBTFMS quickly and accurately calculates real time liquid and vapor inventory data. Inventory calculations include gross and net volumes as well as mass calculations, according to current ASTM tables. Liquid and mass calculations of vapor in LPG are made. Volumes are calculated as per strap table entry. Cylindrical and spherical tanks are also supported.



Hybrid Tank Gauging

With a high accuracy hybrid tank gauging system, tank gauging data as level, interface level, temperature and pressure from field is collected and the density and mass measurements are made in real time.



API Calculator

Reference density may be calculated with SBTFMS API calculator. Manual entry of observed density and temperature for a tank will display the temperature-corrected volume. This ensures that you get new accurate data. The API calculator is the good option if there is no automatic hybrid tank gauging system.

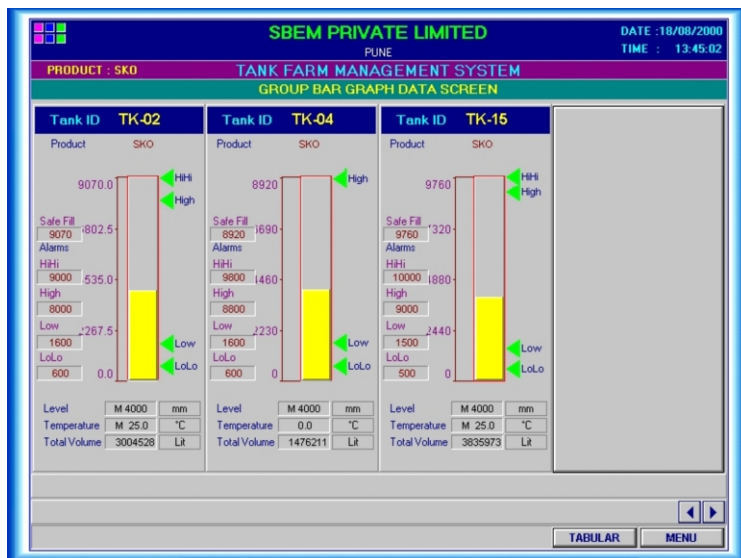
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Grouping

Tanks may be selected and grouped together depending on the user's choice to view on the screen. Maximum of 4 tanks may be seen at a time on a single screen. Similarly, various groups of tanks may be made and selected to view.

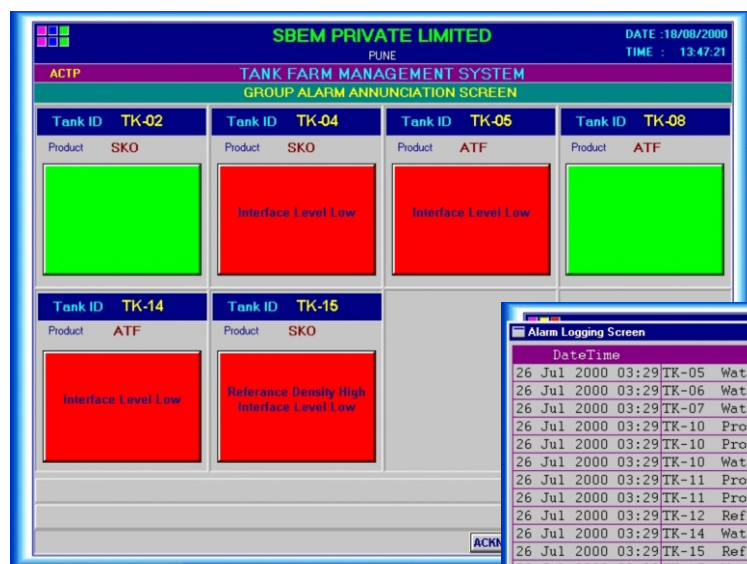
Networking

The excellent network facilities of Windows allow you to integrate SBTIS into your plant's network. Local and wide-area networking is possible via Ethernet. This helps sharing of current tank data files on the servers.



Alarms/ Events

In addition to the alarm contacts in the field instruments, SBTIS provides an array of programmable alarm set points. Users can create their own alarms for all measured or calculated data in order to make their work easier to plan and safer to schedule. Alarms pop up when they occur.



Historical Trending

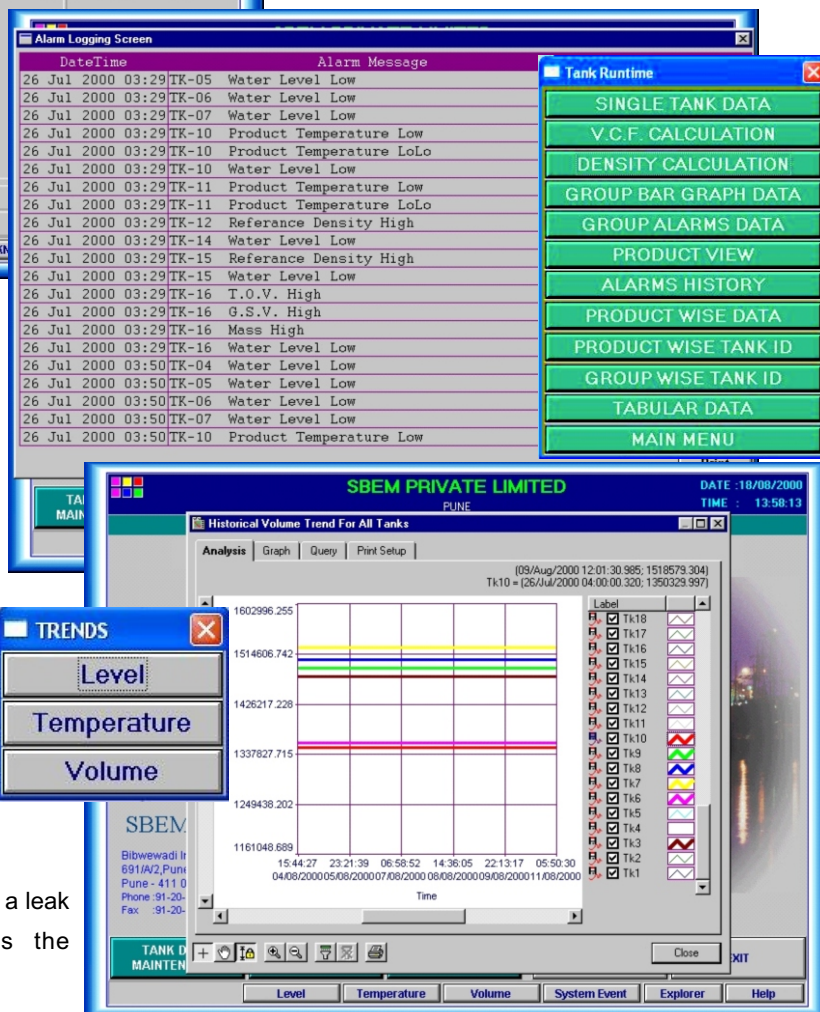
Alarms and acknowledgments, together with all tank information, are recorded and stored for future review and traceability. Operators easily can check tank usage to increase efficiency.

Reporting

Hourly, Shift, daily & monthly reports available. Report module for creating, printing, storing and retrieving reports available.

Leak Detection

During inactive periods, tanks can be put into a leak detection mode. This leak alarm uses the temperature-corrected volume.



FEATURES

Linking with SCADA/ DCS systems

From SBTfMS you can get tank gauging and inventory data by using the Modbus protocol.

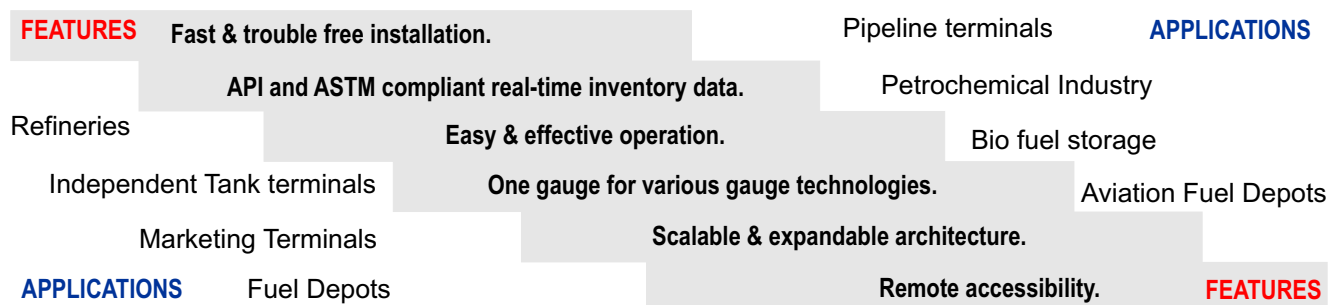
Audit log for events

All alarms, system failure & errors are logged as events to give a diagnostic tool for maintenance.

Security/ User Manager

This user manager permits view of parameter changes. This keep track of changes in the system. This facility display time & date of change made.

Real time tank gauging data	Allows faster response and calculations.
Reliable alarm handling	Receive alarm summary, alarm log and alarm event log.
Leakage alarms	Alarms if the level or volume exceeds predefined level rate or volume rate.
Reports	Schedule reports times. Reports may be saved as pdf.
User-friendliness	The interface is easy to learn and efficient to work with.
Historical data storage	Data available as a graph.
Audit log for events	View when and which parameter was changed.
Flow rate indication	Flow rate with indication of filling & emptying.
Tank & Group views	Create and name groups of tanks. Customize data visualization for each group.
Numerical & graphical displays	Available.
System capability	Up to 128 tanks through 2 CIUs & 200 tanks with up to 4 CIUs.



***Continuous developments may necessitate changes without notice

LF_133-0820-R00

LF_TnkFrmMgmtSys_SBTfMS



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Tank Gauging: Servo, Float & Tape, Magnetostrictive, Float & Board
Flow Meters: Electromagnetic, Ultrasonic