



Savi Chemical ISO Tank Solution

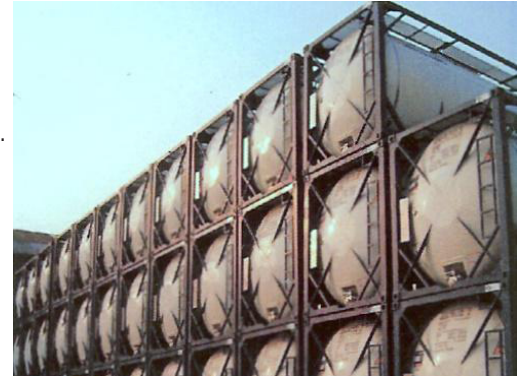
An enterprise-wide platform for tracking & managing ISO tanks across multiple divisions

Customer Benefits:

- >> Enterprise-wide visibility of ISO tanks, including for customers
- >> Real-time tracking of ISO tanks through a multi-modal supply chain from production sites to transfill stations and back
- >> Ability to translate GPS reads on ISO tank location into actionable intelligence
- >> Ability to compare ISO tank movement plans with actual movements
- >> Automated ISO tank dwell time alerts led to improved asset utilization
- >> Solution delivers ROI by reducing operating and capital fleet expenditures

The Savi Chemical ISO Tank Solution provides great value to companies that transport chemicals in ISO tanks through a large supply chain. One Savi customer currently using this solution is an international producer and supplier of liquid and gaseous chemicals. In managing its fleet of 200+ ISO tanks, the customer faced the following challenges:

- How best to utilize assets
- How to give company divisions and customers access to accurate real-time data on ISO tanks
- Access to raw GPS location data, but no way to turn that data into actionable information
- Lack of visibility into ISO tanks' actual movements and location versus movement plan
- Costs associated with rental of assets

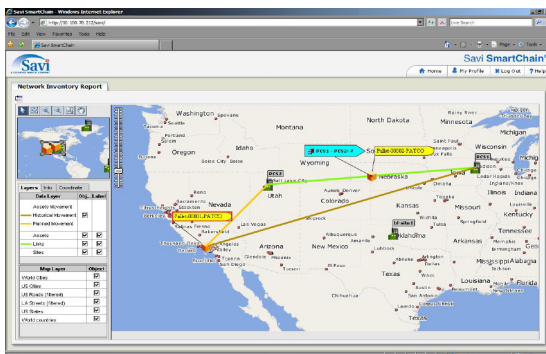


The answer for this customer was to deploy Savi SmartChain® Asset Management Solution (AMS) as a centralized platform to track ISO tanks as they traverse the global supply chain. SmartChain AMS collects raw data from GPS devices affixed to the tanks and translates that data into actionable information on the tanks' location, movements and condition. Previously, GPS data was not separated into current and outdated reads, and there was no way to compare expected reads versus actual reads, or recognize that an ISO tank was at a specific site. The Savi solution is able to provide varying degrees of access to this data across the enterprise and to customers.

SmartChain AMS stores planned multi-modal movements and tracks actual movements against the plan, enabling the customer to better manage rebalancing and global delivery schedules. The ISO tanks move through an international multi-modal supply chain that has no fixed infrastructure, but because SmartChain AMS is device-agnostic, the solution can integrate Automatic Identification & Data Capture (AIDC) data from a variety of sources. In summary, SmartChain AMS provides value through the following features:

- Business logic that automatically translates GPS read events into updates on ISO tank status and condition
- Automatic alerts when ISO tanks exceed dwell time
- Reports that help maintain a lean inventory of ISO tanks
- Geo-fencing of sites and routes allows shipments to be managed automatically

SmartChain AMS provided ROI by reducing the customer's ISO tank fleet, enabling more accurate predictions of future fleet needs and preventing the need to purchase new ISO tanks.



Savi SmartChain Asset Management Solution (AMS)

SmartChain AMS improves asset management and utilization through real-time tracking via bar code, RFID, GPS and sensors. Key value drivers include:

- **Improved Visibility:** Captures near real-time asset updates and displays them on maps and reports.
- **Improved Utilization:** Identifies and balances over- and under-utilized assets.
- **Increased Operational Efficiency:** Sends alerts when shipments arrive or are delayed, creating awareness and empowering organizations to reduce safety stock levels. This helps reduce exposure to costly expedited shipments and demurrage fees.

In summary, SmartChain AMS answers the questions, **"Where are my assets and how can I better utilize them?"**



Before solution implementation

After solution implementation



Lack of ISO tank visibility across company	➔	Different divisions all enjoy ISO tank visibility
Raw GPS data on tank location not valuable	➔	GPS data translated into actionable intelligence
Manual data collection	➔	Automated data collection
No automated alerts on ISO tank status	➔	Shipment status and dwell time alerts
Inadequate utilization of ISO tanks	➔	ISO tank utilization greatly improved
Lack of data on status of ISO tank inventory	➔	Reports to help maintain lean inventory
High costs associated with ISO tank rental	➔	ISO tank rental costs reduced
Sub-optimal replenishment planning	➔	Replenishment begun before tank empty

More About the Customer...

- Operations in dozens of countries
- 2008 revenues in excess of \$1B
- Tens of thousands of employees

More About ISO Tanks...

- Tank capacities are: 5,000 gallons, 11,000 gallons, 14,000 gallons & 15,000 gallons
- Valued at \$600K-\$750K each

More About the Solution...

- GPS tags feed SmartChain AMS; SmartChain AMS makes the GPS data accessible and actionable
- Two-way remote communication permits 'pinging' of GPS devices and conserves device battery life
- All data collection is automated



About Savi

Savi Technology provides an integrated suite of complementary Automatic Identification & Data Capture technology products and solutions that drive business value by reducing supply chain assets, inventory and operational costs for commercial enterprises, defense agencies and other government customers. Founded in 1989, Savi is a wholly owned subsidiary of Lockheed Martin [NYSE: LMT], with headquarters in Mountain View, Calif., and offices in Singapore; Melbourne, Australia; Farnborough, UK; Lexington, Ky.; and Washington, D.C. For more information, visit www.savi.com.

About Lockheed Martin

Headquartered in Bethesda, Md., Lockheed Martin is a global security company that employs about 146,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The corporation reported 2008 sales of \$42.7 billion. For additional information, visit www.lockheedmartin.com.

Contact Savi

Let us show you how Savi's supply chain solutions can work for your organization.

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