

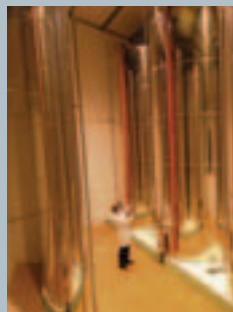
Filling the Gap

Creating a direct link from
management to production



simatic IT

FOR THE EDIBLE OILS INDUSTRY



SIEMENS

MARKET



Business Goals

What does it take to achieve market responsiveness today?

New market dynamics, addressing public health issues and related legislation, guaranteeing food safety, regulatory compliance, timely response to consumer demands and specific customer requirements - all while simultaneously increasing output. These are only some of the complex challenges facing manufacturers in the edible oils industry.

Many manufacturers active in the edible oils industry are, of necessity, facing the complex challenge of changing their business models. That means creating an entirely new set of business and operational strategies for success in today's supercharged market. If business goals are to be achieved, requirements for quality and food safety must be reconciled with the necessity for a more flexible and efficient production.

SIMATIC IT is the Manufacturing Execution System (MES) from Siemens. SIMATIC IT allows edible oils manufacturers to exploit new sources of productivity and raise quality by bridging the gap between business systems and the control layer and by synchronizing all operations along the production life cycle.

SIMATIC IT offers integrated quality assurance, tracking and tracing and comes with functionality tailored to the precise needs of the Edible Oils Industry.

What can we do for you?

DYNAMICS

AMR Research on Manufacturing Execution Systems

MES Provides Long-Term Revenue and Market Benefits Beyond Easy-to-Quantify Operational Cost Savings **July 30, 2003 AMR Research Report -Bill Swanton, Alison Smith**

"The largest benefits of MES come from leveraging the visibility that MES affords into overarching continuous process improvement and supply chain management strategies. At a fraction of the cost and time of an ERP initiative, an MES platform provides visibility into accurate, high-velocity information about production performance. This enables manufacturers to recognize and then seize new opportunities both internally and in the marketplace. By extending production visibility throughout the internal supply chain, one manufacturer increased profit margins on both higher volumes and higher product mix, all while keeping costs constant. The net effect was to preserve profitability despite lower sales - a universal theme for manufacturers in today's uncertain economy."

Your Supply Chain Demands Integrated Quality and Compliance Management **August 28, 2003 AMR Research Alert - Roddy Martin**

"Vendors still offer point applications that cover different aspects of quality and compliance, but not the integrated whole. LIMS, ERP, integrated quality management, MES, data historians, and such applications all run independently, only handling their piece of the business. These applications must still be integrated to meet...customer demands..."

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SIMATIC IT – A paradigm shift

Due to its modular, object oriented, open and scalable architecture, SIMATIC IT enables customers to standardize processes at a high level while maintaining previously unachievable flexibility at the operational level. This unique approach makes it possible to:

- **Roll-out solutions smoothly and gradually**
- **Implement future changes and enhancements easily**
- **Reuse previously defined logic to reduce project duration**
- **Secure investments in local facilities**

SIMATIC IT Cross-Industry Libraries

Pre-configured with reusable functions, the SIMATIC IT Cross-Industry Libraries are delivered free of charge to our Certified Partners. They, in turn, add their unique industry expertise and deliver solutions for the edible oils industry fully tailored to your needs.

SIMATIC IT ISA-95 compliance

ISA-95 is increasingly being accepted as the world standard for Manufacturing Execution Systems that customers can rely on to secure their investments in MES. SIMATIC IT not only covers ISA-95 functions but also actually uses ISA-95 as a blueprint for its product architecture.

As an active Member of the ISA-95 Committee, Siemens continues to actively contribute to the further development of the standard.

SIMATIC IT & Totally Integrated Automation

SIMATIC IT is an integral part of Totally Integrated Automation (TIA), the Siemens unique common basis for customer specific automation solutions that satisfies the whole range of automation requirements. SIMATIC IT benefits from this integration with the rest of the Siemens product line thanks to a wide range of pre-configured objects, ready to be used without any other engineering effort. TIA allows quick project implementation, native integration and compatibility across different generations of products.

STRATEGIC A

To respond quickly to changing market dynamics, edible oils companies must ensure plant visibility and transparency. This will allow them to meet customer specific and consumer demands, secure competitiveness and respond successfully to new market and regulatory requirements. Analysis and optimization are the keys. SIMATIC IT can effectively support customers in the edible oils industry in achieving their business goals, particularly in regard to plant visibility and traceability, food safety, market responsiveness and production efficiency.

Consumer health awareness

How do you address new requirements of a dynamic market?

The influence of consumer behavior in the manufacturing and distribution realms; firstly the growing health consciousness among consumers. Market dynamics cause consumer demands, production and distribution to ever higher degrees of market responsiveness.

SIMATIC IT enables increased customer service and a higher level of service to the capacity to deliver the right product at the right time and place.

Production Efficiency and Flexibility

How do you increase profitability?

Production efficiency and flexibility remain top priorities. Cost containment and inventory control have become major challenges in the current market. However, coordination of load/unload activities plays an important role for traceability issues. In order to realize these objectives, companies must significantly increase production transparency, enable real-time planning and scheduling, and finally synchronize all load/unload operations with all quality and manufacturing related activities.

SIMATIC IT coordinates and synchronizes business and production process through an airtight and complete information exchange between IT systems and the staff involved in production, quality and ERP departments.

Business

- Dynamic and shifting market
- Increasingly severe competition
- Changes in market structure
- Highest quality expectations
- Changing consumer behavior
- Innovation in bio-technology
- Changing trade policies

Globalization and

How do you sustain and grow the business in a changing value chain?

The edible oils value chain is undergoing a profound evolution. The industry has to find the highest anywhere in agribusiness. The industry has to find ways to become more demand focused with greater product variety and better service to customers, being able to change products and process designs. The importance of increasing importance.

SIMATIC IT enables the management and control of all production and manufacturing procedures according to new processes and product requirements.

ADVANTAGES

Quality, nutrition and food safety

Delivery of Edible Oils and Fats is significant in at least two major drivers, and secondly, the increasing concern with food safety. The global oilseed complex to constantly shift, forcing manufacturers

to achieve a level of operational excellence than ever possible before, thanks to the high quality of the raw materials.

Drivers

Changing markets and new regulations
Consumer perception of fat
Changing preferences
New technology
Government policies

Quality, Regulatory Compliance and Traceability

How do you meet requirements for Food Safety and Regulatory Compliance?

Consumers and regulatory bodies are more concerned than ever with food safety. This has caused regulatory bodies worldwide to react with tougher legislation, industry guidance and food safety initiatives. Besides the already demanding international, national and local food laws, the edible oils industry also has to meet strict industry specific regulations, such as the US Bio-Terrorism Act and the EU EC/178/2002 as well as the newly emerging labeling rules and regulations for Trans Fatty Acids in the US and EU and for Genetically Modified Foods in the EU.

SIMATIC IT supports all new labeling regulations and completely integrates quality control and assurance into production processes, thereby enabling complete tracking and tracing, full product genealogy and regulatory compliance.

Production and Consolidation

Production chain?

Production. The level of consolidation and internationalization is one of the major drivers for new efficiencies to meet changing needs and therefore has led to increased quality and safety. Being a reliable partner for your customers is a fast without compromising either delivery capability or quality.

Centralized product specifications as well as the ability to modify product needs.

From Global to Local Design

Management of material variability and fast market response

SIMATIC IT Interspec helps manage, formulate and distribute both company-wide as well as plant and customer specific product specifications for raw materials, semi-finished and finished products as well as packaging materials and supports labeling regulations.

Download Orders

Leverage the potential of your ERP

SIMATIC IT allows bi-directional data exchange with ERP systems, thus leveraging ERP potential. This seamless integration with ERP allows synchronization of all activities, avoiding bottlenecks and reducing non-productive work as well as the risk of data inconsistencies.

Map Local Resources

Enforce standard procedures

SIMATIC IT enables the central definition of processes and procedures yet can use local plant resources and constraints. This enables consistent and homogeneous production procedures throughout various plants and increases the return on existing investments.

SIMATIC IT along the Production Lifecycle

SIMATIC IT Framework, Components and Libraries facilitate and synchronize operations all along the production lifecycle including product specification management, planning and scheduling, production, and laboratory management, as well as tracking, tracing and production analysis and optimization.

Test

Seamless integration of QA/QC processes

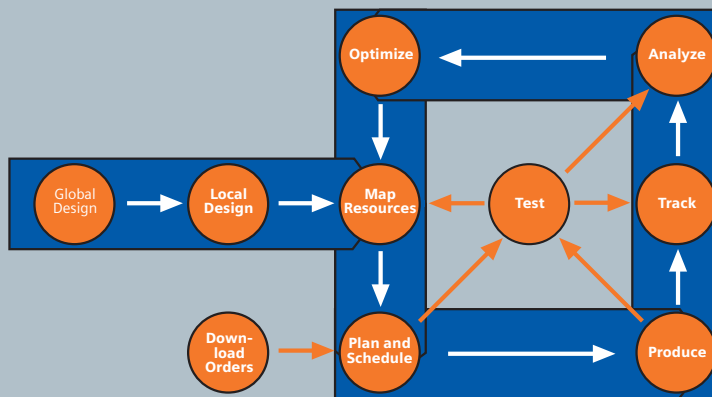
SIMATIC IT includes a market leading Laboratory Information Management System to manage laboratory workflow and samples. Online and at-line tests can be executed and documented automatically, providing feedback to the production process and supporting regulatory compliance.

Analysis and Optimization

Continuous improvement of performance and quality

SIMATIC IT enables the definition and calculation of Key Performance Indicators (KPI's) in order to measure business performance. All production related information is available for better decision support. This information will help to continuously improve performance and increase quality.

Added Value



Plan & Schedule

Optimize throughput, production flexibility and resource utilization

SIMATIC IT offers the full degree of planning and scheduling accuracy necessary for in time delivery. Using real time data, SIMATIC IT optimizes resource utilization and throughput while increasing the flexibility necessary to make adjustments during production, such as those due to changing constraints.

Produce

Coordination and synchronization of all operations

SIMATIC IT coordinates all activities to drive and optimize production in real time and increase efficiency and quality. Significant cost savings will be the direct and immediate result of on-spec production, reduction of waste, earliest possible recognition of non-compliance and automatic and appropriate response when called for.

Track & Trace

Regulatory compliance and liability protection

SIMATIC IT enables the tracking of every movement of material and offers full upstream and downstream genealogy. It enables edible oils companies to react in a timely and appropriate manner to requests from regulatory bodies as well as limiting liabilities and cost in case a recall should become necessary.

SIMATIC IT

SIMATIC IT Production Suite

The SIMATIC IT Production Suite is composed of the SIMATIC IT Framework and SIMATIC IT Components.

The **SIMATIC IT Components** include basic and guaranteed MES functions for order management, material management, messaging, personnel management and report management.

The **SIMATIC IT Framework** provides a graphical environment to model production process, equipment and facilities intuitively and without the necessity of programming skills. The graphical production model offers a clear understanding of the plant's behavior and visualizes the entire production status.

SIMATIC IT Historian

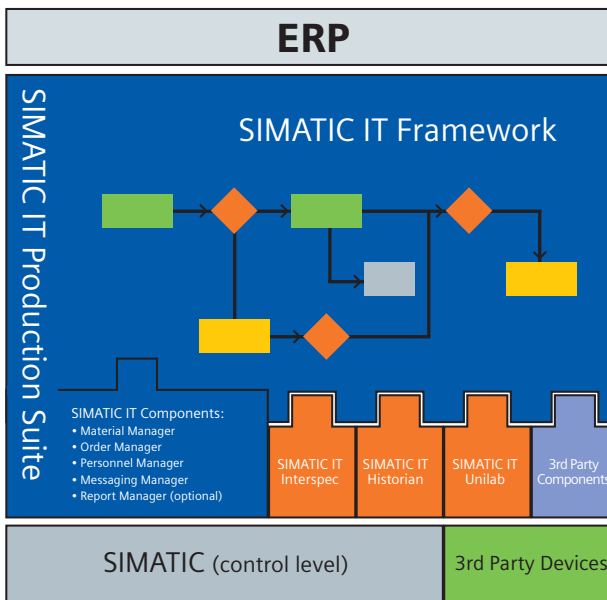
A collection of software modules, to collect, store and quickly retrieve process and production information for Quality Assurance, Reporting, Certifications, Statistical Analysis, Performance Monitoring, etc.

SIMATIC IT Unilab

Enterprise Laboratory Information Management System (LIMS) handling all quality data in the laboratory (samples, analyses, instruments, etc.) conforms to all industry and laboratory standards including GLP, GAMP, ISO and 21CFR11.

SIMATIC IT Interspec

The Enterprise Specification Management System for handling product specifications for raw materials, semi-finished and finished products as well as packaging materials. This incorporates company-wide specifications as well as individual specifications for a single plant, supplier or customer.



SIMATIC IT Report Manager

This optional component of SIMATIC IT offers advanced, fully integrated and user-friendly reporting functionality. The Report Manager meets regulatory requirements for ad hoc reporting (for example, EC 178/2002 and the US Bio-Terrorism Act) and offers valuable operational insights.

SIMATIC IT Client Application Builder

Thanks to SIMATIC IT Client Application Builder, all business related information is integrated and aggregated into reports, enabling better management decisions and supporting regulatory compliance. These high level financial performance indicators enable increased competitiveness and promote continuous improvement of business.



More flexible, efficient and faster: SIMATIC IT, the future of production

SIMATIC IT continues the success story of TIA (Totally Integrated Automation). **SIMATIC IT** enables total integration, full support of existing industrial standards and a component based approach.

SIMATIC IT Framework synchronizes, analyzes, coordinates and optimizes your production. Heterogeneous applications can be integrated to better manage the complexity of production.

SIMATIC IT Components provide excellent manufacturing functionality, such as Laboratory Information Management, Production Performance Management and Product Specification Management. These components can be coordinated by **SIMATIC IT Framework** or used as independent applications.

The proven interaction of the different components leads to higher efficiency and quality and protects your investments.

Where do we go from here?

More information:

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www.siemens.com/food

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