CableMES

Boost product quality and improve on-time delivery

CableMES streamlines operations while helping improve performance

UL Solutions

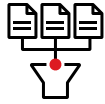Safety. Science. Transformation.™

CableMES

As the cable industry progresses technologically, it is critical to have modern digital tools that keep pace. The CableMES Wire and Cable Manufacturing Execution System from UL Solutions is a next-generation software platform that helps manufacturers maximize plant production, improve product quality, manage inventory and maintain reliable delivery schedules.
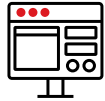
CableMES acts as a conduit between the shop floor and your business, helping wire and cable manufacturers monitor, manage and control key aspects of their production processes.

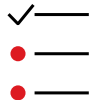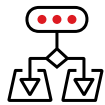# Core functions of CableMES include:

- Data import and export

- KPIs dashboards and reporting

- Material control

- Planning

- Process control

- Production control

- Productivity control

- Quality control

- Integration with ERP

- Scheduling

Creating connections between ERPs and shop floor machines

CableMES incorporates the AVEVA™ System Platform for data acquisition, helping to create a strong connection between your business and compatible shop floor devices. CableMES also integrates with the Enterprise Resource Planning (ERP) system, allowing for real-time data transfers in both directions.

In addition, CableMES links seamlessly with UL Solutions CableBuilder Enterprise design software, helping to validate that each product adheres to correct specifications.

Other key integration benefits include:

Continuous improvement facilitation

Controlled inventory management

Enhanced traceability

Help manufacturers maximize the production process through digitalization

Help manufacturers reduce manufacturing production mistakes

Operational enhancements

CableMES also monitors and reports production in real time — for example, if a machine runs below its product output target speed, CableMES detects the anomaly and instantly alerts the operator and other stakeholders. This real-time information prompts immediate issue resolution and evaluates whether all machines are running to expectations.

CableMES also analyzes data to identify behavioral trends across product groups, process types, shift formations and shift patterns. These insights drive production and process improvement, including automatic generation of overall equipment effectiveness (OEE) data.

Other operational benefits include:

Ability to track work in progress

Identification of hidden production capacity

Precise drum and raw material management

Production order sequencing

Real-time manufacturing floor visibility

Quality control improvements

CableMES excels at performing quality analysis, loss identification, product tracing and nonconformance management across the manufacturing cycle. These functions enable predictive error prevention (e.g., preventing incorrect raw materials from being used), as the system immediately highlights errors and communicates those errors to the relevant stakeholders. This prevents issues from negatively impacting downstream production line processes.

Other quality-related benefits include:

Auto-generated quality planning

Automated quality recording

Full traceability of nonconformance

Real-time alarms and historical trending

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Augmented performance

Achieving desired levels of overall equipment effectiveness (OEE) requires cross-functional teamwork — and software tools that enable such teamwork. CableMES uses the powerful AVEVA™. Historian tool, which collects all pertinent process data and enables users to correlate this data with process and quality alarms. Customers can then use this data to identify trends and provide long-term benchmarks.

Together, AVEVA Historian and CableMES tools provide a wealth of management reports that allow you to implement impactful business strategies and identify anomaly root causes.

Other performance benefits include:

Improved machine and material efficiency

Less rework and fewer errors

OEE machine effectiveness tracking

Reduced paperwork and data entry

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Easier planning and scheduling

Planning challenges include materials availability, last-minute changes in cable lengths (or customer orders) and the proper coordination of manufacturing batches. CableMES provides the tools, information and control that can help planners put together strategies before manufacturing begins. Then, the planned jobs can be accurately scheduled using software-generated, interactive drag-and-drop scheduling boards.

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High-impact KPIs, dashboards and reporting

In CableMES, key performance indicators (KPIs) can be represented on a per machine, cell or factory basis, with actual execution times illustrated in dashboards or SSRS (Microsoft SQL Server Reporting) reports. The data in the system can also generate additional reports and KPIs that represent business-specific metrics.

Examples of KPIs include:

First-time yield

Mean time to failure rate

OEE

On-time delivery

Total Effective Equipment Performance (TEEP)

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Digital transformation-ready tools

CableMES manages resources by factoring in customer order dates, length of cable required, availability of stock and manufacturing production capabilities, helping cable manufacturers convert their facilities to smart factories. Once production orders are automatically generated, CableMES monitors and tracks products through the manufacturing life cycle and confirms that orders are processed on time and to specified costs while unearthing hidden production capacity.

This automatic production line data gathering capability results in higher process integrity and accuracy, integrated communications and process validation with minimal operator interaction required.

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Why UL Solutions

As a global safety science leader, UL Solutions is committed to supporting digitalization of the cable production process to address the key challenges that the wire and cable industry is facing today.
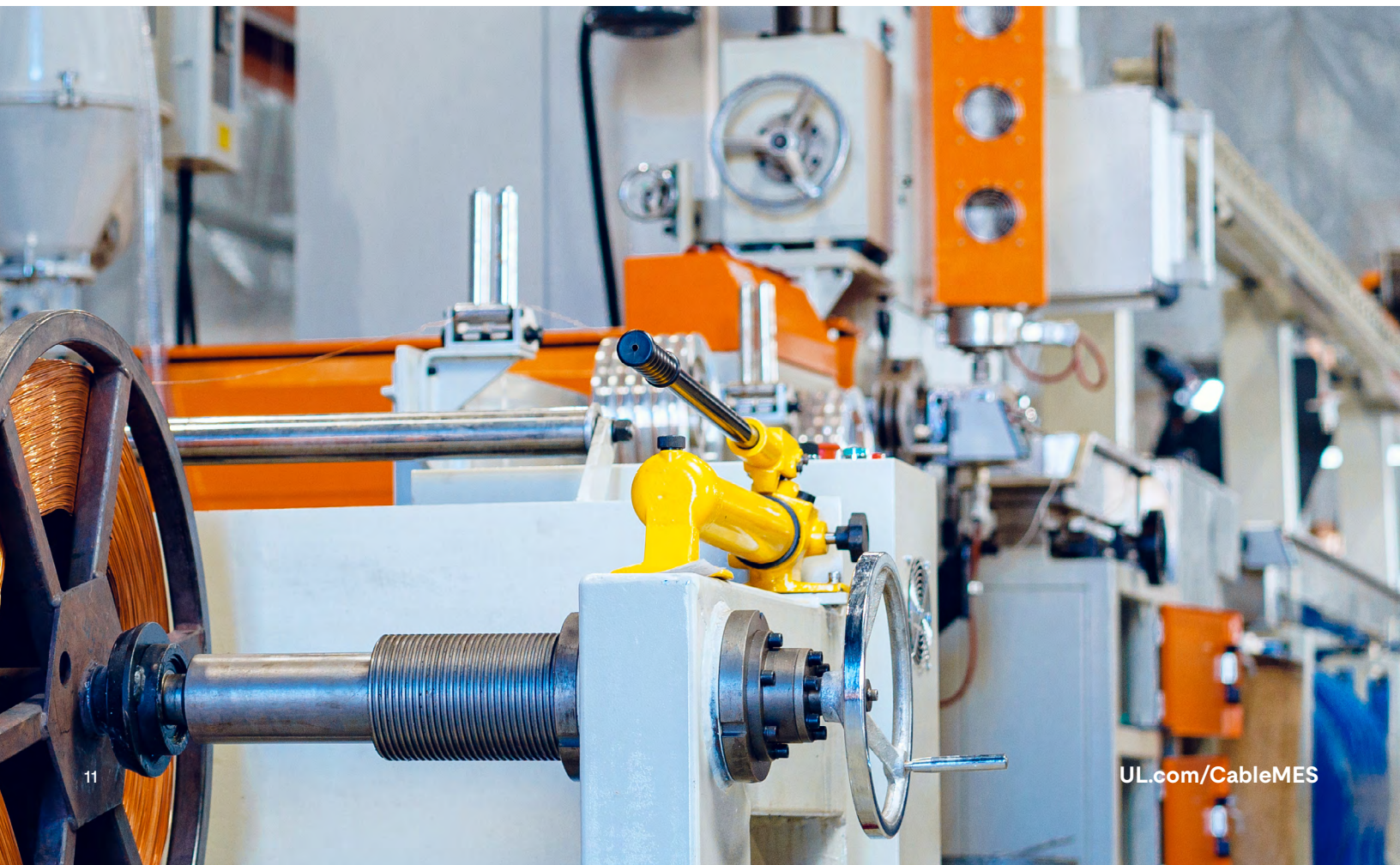
Our expertise and services help customers:

- Achieve simpler, faster and more efficient certification
- Reduce errors through digitization
- Introduce efficient review of multiple standards from a single design
- Enhance in-house quality management for manufacturers globally

To help achieve a greater return on your investment, we offer:

- Implementation services to help maximize the benefits of CableMES – includes scope and system setup
- Training services to help train your personnel in the use of CableMES
- Support services to help maintain high availability of the application
- Integration of CableMES with your ERP and/or CableBuilder
- Customization according to your needs

Learn more about how CableMES can support your wire and cable production operations.

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