



Optimizing Manufacturing Performance with CC+I's Production Line Monitoring System

PLMS

Computer Control + Integration, Inc.

Beverage Suite

Key Benefits:

- Automatic Capture Of Key Performance Indicators
- Accurate To The Second Capture Of Each Down Time Event
- Real Time Feedback To Production Personnel
- Standards Based Performance Measurements, including Overall Equipment Effectiveness (OEE)
- Eliminates Manual Line Events Recording
- Historical Data Available For Reporting And Equipment Performance Analyses
- Improved Efficiency Through Better Understanding Of Equipment Performance.
- Preconfigured Reports And Graphical Analysis Tools That Present Data By Line, By product, By Shift, etc.
- Accurate Accounting Of Total Number Of Stops Regardless How Short The Duration
- Captures "Below Standard Speed" Events In Addition To Actual Stops

Finally ... A Manufacturing Production Monitoring System That Makes Sense (And Dollars)

In the past, manufacturing production managers with a desire to analyze and optimize their production had two choices.

With little or no investment, production process events and totals could be captured by line operators by hand, an approach that is highly dependent on the "sharpness of the pencil" of the individuals generating the data and forced managers to invent their own analysis tools.

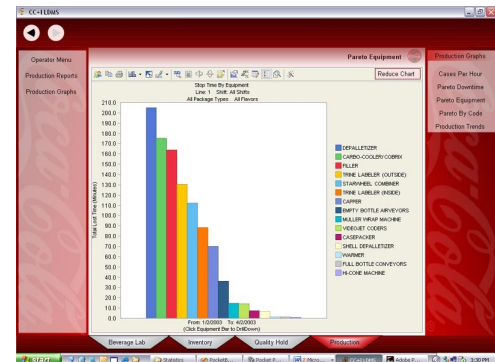
The other choice typically involved a huge capital investment in a complex automation system that provided reliable data collection, but was difficult and costly to install and maintain. In addition, this approach commonly lead to "paralysis by analysis" syndrome, where the sheer volume of data collected by these systems was so overwhelming that it was difficult and overly time consuming to determine the real bottlenecks and trouble spots in the process.

The Production Line Monitoring System (PLMS) developed by CC+I, based on years of input from real production managers, and field proven in multiple production facilities, gives you another choice. A cost effective approach to automatic data capture that allows the line operators to supplement, rather than create, the production information using a simple and reliable automatic data collection system.

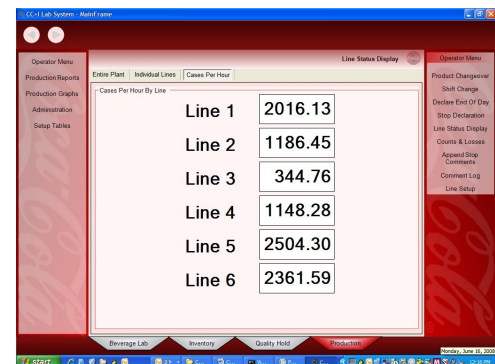
System Highlights

Improving Performance on the Production Floor

- Accurate to the second measurements for run time, down time, and product change-over time
- Extremely simple and reliable electrical interface, requiring only one sensor per line
- Maintains real-time cases per hour, filler speed, filler stops
- Capable of deriving data from existing network capable PLC hardware
- Automatically maintains an event log for each stop by production line
- Operator supplements each down time event detected by the system by declaring the actual cause of each "significant" event



Pareto Analysis used to pinpoint problem machinery.



Real Time Line Cases-Per-Hour Display

- Wireless networking provides real-time data updates for stop declarations

User Friendly System

- Easy to use requiring little operator training
- Flexible in terms of configuring workstations and product specifications
- Easily accommodates the seamless integration with other software modules
- List of available stop causes and equipment codes are easily maintained through configuration screens
- LED displays allow operators to view up-to-the-minute feedback on their line performance.

Complete Management Information Software

Efficiency Improvements

- Improved efficiency through better understanding of equipment downtime.
- Measurement tool for reviewing performance over time.
- Real-time analysis of performance indicators
- Metrics focus on OEE—how effective manufacturing equipment is utilized

Marquee Feedback

- LED displays allow operators to get up-to-the-minute feedback on their line performance.
- Additional communication features allow messages to be broadcast indicating important information, such as "Date Codes, Promotions, etc."

Track Mechanical Maintenance

- Track mechanical maintenance utilization for mechanics performing electrical / mechanical breakdowns as well as other downtime repairs

Team Performance Measurements

- Measure shift performances by line for team comparisons and accountability

Focus on Rejects/Yields

- By focusing on reject levels and yields, you can drive your yields and quality numbers higher.
- Indicators determine if you are getting good valve maintenance and good material usage.

Changeover Time Accuracy

- More accurate measurement of changeover time.

Pinpoint the following:

- Capital Improvements – Determine areas which need improvements. Justification for capital expenditures through data analysis.
- Training Issues – Determine issues through downtime analysis
- PM Schedule – Determine if you have adequate PM program as well as pinpoint recurring issues. Revise your PM program for existing assets or machinery.
- Improve scheduling through historical analysis of change times.



Utilize handheld applications to scan components, enter downtime events, and get real-time feedback.

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Systems with Value, Plus.



Computer Control + Integration, Inc. (CC+I, Inc.) was founded by a group of design engineers and top management personnel charged with the responsibility of designing, developing and successfully implementing computer integrated manufacturing systems used internally throughout a large multibillion dollar manufacturing corporation. In July 1988, this group formed a private company and began applying this same factory floor automation and management information systems experience to different manufacturing sectors, in particular the food and beverage industry.

For more information about systems that CC+I has developed and implemented for the beverage industry, call us today at 864-458-7587.

www.ccplusi.com