

A Whitepaper on Industrial Vision Systems

Contributors: Steve Marion CEO A1 Webcams - July 15, 2016

Industrial visualization systems have been around for a very long time; however, only a few companies realize the true benefits of a fully integrated system. A typical Line Monitoring System will eliminate losses 5 times faster with 10 times less resources and has an average return on investment in less than 90 days. Installing a fully integrated Line vision system will increase your OEE and drive higher margins across product lines.

Industrial visualization system come in many different types, sizes and speeds; but fundamentally it consists of three main elements

- 1) Camera Systems
- 2) Data storage system
- 3) Downtime of MES integration

In the early phases of installing cameras, production lines cameras replaced people sitting and watching lines; and/or when employees had to watch a problem area in your production process only to find they were unable to view the problem in any details or missed the event.

The next steps used were to install temporary cameras on problem areas of the production line. The concept was quite useful as you were able to rewind the recording to the event time and replay in slow motion. This would allow engineering to investigate the actual cause of the line event and quickly fix them. Over time it proved to be very useful but required labor to rewind and view plus any relocations.

As time progressed major manufactures saw the benefit and permanently installing camera systems on factory lines but were still required to search for the events manually. The next logical step resulted in the integration of the MES Downtime data base with the Digital storage devises. This resulted in the ability to now immediately review, save and or send the event to anyone involved in the line optimization. This is not a difficult task as most major factories have a data base used for line events. The integration simply ties specific cameras to Programmable Logic Controllers (PLC's) on the machinery.

By covering each production line with integrated vision systems production teams can review, replay (in slow motion) and analyze each downtime event after it occurred; regardless of where and when it occurred. This capability allows the teams to quickly eliminate possible causes to the problem and focus on true root cause, derive a solution(s), and move on to the next outage.

The net results of fully integrated systems are:

- Increased OEE (productivity and profitability)
- Real time visibility/comparison across the manufacturing plant or lines
- Reduced production line blockages and starvation
- Accelerates trace analysis, root cause diagnosis and issue resolution
- Remote viewing through PC (smart phone on Camera's)
- **Continuous** improvement tool for technical staff, line change overs and new employees
- Network bandwidth not impacted, stored locally
- Quick return on investment

There are many different types of systems from camera speed, picture quality, storage volume and bandwidth requirements. If you are interested in learning more, please contact us at A1 Webcams the premium Industrial Vision Systems Company.



Contact:

Director of Business Development:

Corey Greth

corey.greth@a1webcams.com

714-688-7986