

The productivity benefits of autonomous machine vision

Research from the University of Warwick found that happiness made individuals 12% more productive. Having a happy workforce may be the first step to improving productivity, but proper tools and advanced technologies will take productivity significantly further, particularly for industrial manufacturers. Nir Zamir, VP of marketing at Inspekto, looks at how manufacturers can improve productivity with autonomous machine vision systems.

Productivity is a measure of output per unit of input and manufacturing productivity is determined by several factors including equipment, machinery and the layout of the production line. To improve productivity, manufacturers must first identify where losses and scrap are made and then take action to increase output.

Applying quality assurance as early as required is key to increasing yield and decreasing losses. With machine vision technologies reaching new peaks, visual QA is becoming increasingly popular, to provide consistent and accurate inspection of products for flaws. Machine vision solutions of the past are known to come with baggage including; long wait times, an agonising reliance upon vision integrators, and excruciating high costs and downtime.

One key trend driving productivity in manufacturing since last year is the introduction of Autonomous Machine Vision. The affordability and immediacy of autonomous machine vision systems allow manufacturers to release manpower from manual visual inspection, identify faulty components early on and directly reduce scrap.

Maximising manpower

Autonomous machine vision systems serve manufacturers that are still running manual visual inspection, because they are too expensive or not possible, or those operating unsatisfactory traditional machine vision solutions.

Adding an autonomous machine vision system to such a production line means that the manufacturer no longer requires employees to work on manual visual inspection. In the UK, the average value added by each employee in automotive engineering is £100,000 per year. By assigning employees to tedious inspection tasks that add no value, the manufacturer loses £100,000 per year for each employee. Considering that most facilities will run multiple shifts and have several employees assigned to visual QA, over time, a simple investment of €9,720 in an

Inspekto S70 can save a plant hundreds of thousands. In one recent installation, one Inspekto S70 installed is saving the plant a straight €1,420,000 over its depreciation period. This precious budget can now go where it belongs – enhancing production, competitive edge and productivity.

The system's Plug & Inspect technology makes it suitable for any handling method and any product range and its deep learning capabilities means that in minutes, the manufacturer can configure the system to inspect multiple products on the same line – something which has historically been impossible.

Plug & Inspect technology also means that systems can be stored until needed and then rapidly set up on the line, with no downtime or labour expense. Plants using Inspekto S70 units, are even known to install them during lunch break. Alongside this, the manufacturer will benefit from the operational savings in lead time, mean time to repair, yield and labour costs.

The benefits of Total QA

Autonomous machine vision systems can be installed and set up in 30 to 60 minutes, without the intervention of a vision systems integrator. This, combined

with an affordable sub €10,000 price tag, means that manufacturers can install an autonomous machine vision system at every required point on the production line. This concept, known as Total QA, enables manufacturers to identify defects before they are buried into a product, meaning that fewer products will fail the end of line test.

Total QA also prevents the manufacturer from wasting energy on a product that will inevitably be scrapped. On top of this, many useful applications can be stacked on an Inspekto autonomous machine vision platform – including Inspekto Trace that archives all products' images and data, enabling efficient void-claim rejection and root-cause analysis, further improving productivity and yield.

Research from the University of Warwick correctly stated that happiness is the key to unlocking productivity. What better way to increase employee happiness than giving them access to a product that is easy to install, operate and won't break the bank? In short, autonomous machine vision makes QA managers love their jobs.

www.inspekto.com

