

NEWS & VIEWS



NEW ERA FOR LOW COST LABEL INSPECTION

Verifying that each and every can has the correct decorative design and is free of major print defects aids customer confidence and helps to reduce potential Hold-For-Inspections (HFIs). While this is a desirable option, it has not always been cost effective.

Sencon's all new vision system brings the ideal level of protection at a totally new, low level of investment. This has been achieved by using new technologies to produce a miniaturised Label Verifier at a fraction of the cost normally expected for comparable vision systems, and without sacrificing Sencon's trademark accuracy and ease of use!

Rapid payback on the Sencon Label Verifier means that the prevention of HFIs and recalls that can tarnish your reputation, is now irresistibly cost effective. With a Sencon Label Verifier you can afford to constantly monitor your whole production flow for defective and misprinted labels, as well as rogue cans left over after a label change.

While on-line inspection is ideal, finding a location to mount a vision system may be



Single file Label Verifier application



Light tester mounted Label Verifier

awkward, as the unit always needs to be mounted on a single file track as close as possible to the palletizer. But the Sencon solution to this problem was typically innovative. Using a purpose built camera housing and specially designed curved lighting array, the vision system can be mounted inside light testers for in-machine testing. The camera housing you can see in the pictures is the complete system, there are no additional cabinets to locate, just the electrical connections and three push buttons. This makes for a neat and effective installation as no trackwork changes are needed and the controls for the vision system are routed through to the light tester's control panel.

Operation simply involves one extra button press during label changeover. Operators quickly learn the simple,

three button controls: Stop, Start and Learn.

Pressing the Learn button after a label change begins the Verifier's self-learning cycle. This intelligent internal technology removes the risk of incorrect set-up by quickly building a composite picture of a well-decorated can. With Six Sigma performance capability every can is then compared to the composite model, so the risk of accidental rejects is as low as two in a million.

Canmakers are already taking up miniaturized Label Verifiers from Sencon. And they are already avoiding wastage, HFIs, and customer complaints.

VOLUME 30

In this issue

..Page 1
A new era for label inspection

.. Page 2
Improving weld quality

In Brief

.. Page 3
Better can counting

..Page 4
Smooth copper speed control

Subject Key

2pc canmaking

3pc canmaking

Beverage end making

Food can end making



News & Views is published by:

SENCÓN
CONTROL DOWN THE LINE

For more information about Label verification, tick the box on the reply sheet.



Improving weld quality

At the Huber plant in Germany, weld quality and welder downtime had been causing a major headache. But Sencon's new Margin Inspection System offered a solution to the problem which has seen their product quality rise to world class.

Huber Verpackungen GmbH based in Öhringen, Germany, manufacture a wide range of 3pc cans for both the food and general can markets as well a small beer drum production. Quality has always been of prime importance to Huber. Their plant in Öhringen has three coating and two printing lines in addition to many welding lines. Huber was the first plant in Europe to take delivery of the Sencon Margin Inspection system.

A common quality problem with the welding process is the risk of contamination in the uncoated weld margin of the body blank. Major contamination in the margin will generally cause the weld wire to break resulting in inconvenience and downtime. But at least the contaminated blank will go no further!

A more insidious problem is when small amounts of contamination allow the weld process to function normally, but introduce a weakened or slightly porous weld seam. This defect can go unnoticed right through the manufacturing process and will only come to light when the can is filled. At this



SC600 Installation at Huber Verpackungen

Huber was the first plant in Europe to take delivery of the Sencon Margin Inspection system.

point the costs and embarrassment are significant, as not only are the cans scrap, but contents are lost and the filler has down time while replacement cans are located, not to mention the cost or sorting the remaining stock of empty cans.

Sencon's approach to the problem has been a three year development program to produce an inspection system which uses imaging technology to carry out a detailed analysis of each weld margin. Using a dedicated inspection head for each margin on the sheet, thousands of images are



Margin contamination

analysed before the sheet is given the all clear. All of this has to be done in real time for the online inspection to be of value.

The inspection can be done immediately after the coater or just prior to the slitter depending on the customer's choice. A single colour touch screen gives all the necessary information and feedback to the operator about the performance of the coating process on a sheet-by-sheet basis, as well as the statistical average and the standard deviation for an entire batch.

Huber have seen a serious reduction of weld failures and seam porosity. They are already looking to purchase a second system in the near future.

For more information about Weld Margin Inspectors from Sencon, tick the box on the reply sheet.

In Brief

The X-Seam On Show

Sencon will be displaying X-Seam, the automatic non-destructive seam measurement system, at the Emballage show in France, from 22-26th November 2004!

Existing methods of seam measurement involve cutting cross sections, and risk distorting the very area that is under inspection. The X-Seam on the other hand uses x-rays to scan the double seam, without effecting the contents or the can, and

automatically inspects the seam images, to get where no inspection has gone before!

Detailed results and visual x-ray images of each seam are displayed on a built-in monitor, which also features embedded calibration and maintenance help. Cans with good, normal seams, are safely returned to the line undamaged, with unaffected contents.

One day, all seams will be measured this way!

Coming Soon... Multi-end Enamel Rating

Sencon's range of enamel rater options has been increased with the introduction of the Multi-End Enamel Rater. Based on the successful SI9100 this unit will test 8 ends at a time, without sacrificing the ease-of-use, durability and consistently accurate performance of the Sencon Enamel Rater range.

A full story will appear in the next issue, but if you can't wait, you can order a free video CD from the reply sheet.



Better Can Counting

Sencon has studied the way cans move down the line to a whole new level of detail, and identified the specific, subtle problems of can counting. They have produced a counting sensor that precisely targets and solves those problems, ideal for either production or spoilage counting.

This sensor avoids inaccurate counts, makes the production figures add up, and gives a much better picture of what's happening on the line.

"I spoke to a major canmaker just the other day," says Ed, from Sencon support. "The "through-the-wall" plant had been suffering difficulties in trying to accurately supply their customers. The folks on the other side of the wall are doing their own

show that it was counted. He runs the can the other way and the light does nothing, "because we don't want to count backups."

But that's not all. "What do you think happens when they start going forward again?" asks Ed, "and they travel past the detector a

"Ideal for production or spoilage counting."

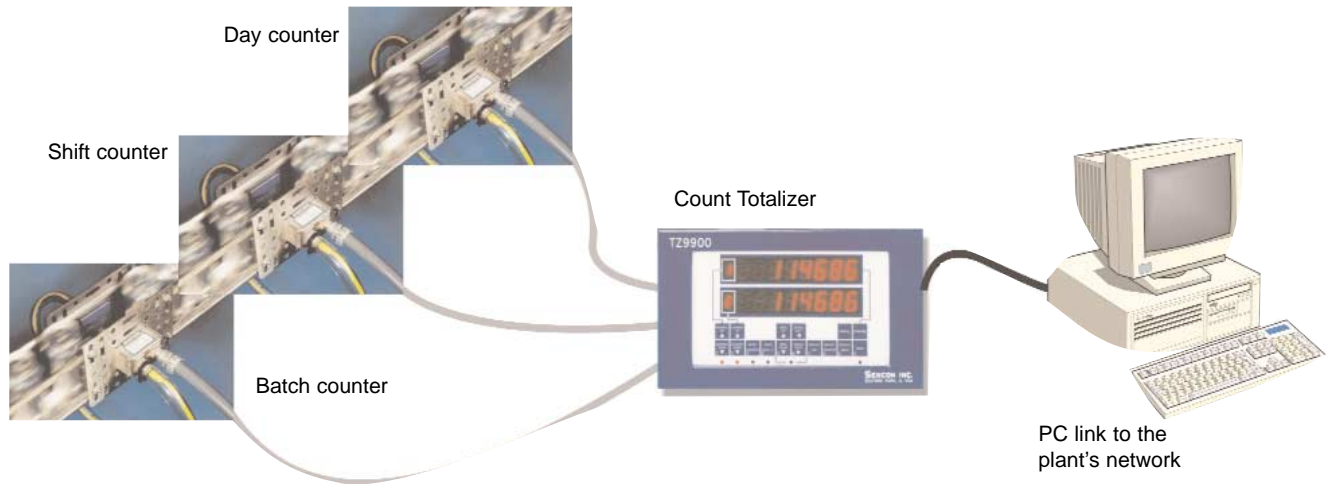
second time? Standard proximity sensors would end up with an overcount, of course. But not this one!"

He moves the can passed the sensor for the second time in the forward direction. This time the light stays off, "because we don't want to count repeats," he concludes. "This sensor actually ignores the cans that come through twice!"



Ed confides. "It has three Sencon Count sensors, so there's some redundancy just in case one falls off or something! Generally you leave one sensor running all day, reset one sensor every shift, and the other one every product change. That gives you a great deal of information all of which can be cross checked. Locally the data goes to a Sencon Totalizer (TZ) for amalgamation.

The TZ is stand-alone, battery backed and password-protected, so the data is not going to get lost or changed! Now you've got these different counts for the day, the product and the shift, and the TZ can be connected to your network, so suddenly the analysis you can do is improved astoundingly! If you're product counting



counting and they're getting different figures. So everyone suspects that all the counting is off the mark.

"But our sensor is considerably more sophisticated than a straightforward proximity sensor. It has two finely-tuned detection fields which ensures cans are counted, whether they are spaced out or bunched up, and whichever guide rail they are closer to.

"Second, the Sencon Counter is uni-directional, so if the cans back up down the line you avoid getting an overcount." He shows us how it works with a demo setup. Ed moves a can past the count sensor in the forward direction, and an LED flashes to

How does it do that? Ed just smiles, wryly. "Its very intelligent. But it's also solving the jiggling problem. This is when the cans are stationary, but the conveyor keeps running underneath them and it jiggles the cans around and they end up getting counted a bunch of times... Not any more! When cans are dancing around in front of this sensor it just says 'I counted you already!'" He laughs.

The Sencon Can Count Sensor also has a divide-by output function in case it's linked to a PLC that may not cope with a signal for every single can. Or you can feed the data to a Sencon Totalizer unit (TZ) for analysis.

"That's the ideal line in counting terms,"

your invoices should now be correct, or you can examine spoilage down to an individual can!

"You have to say how accurate the sensor is, too," prompts Ed, proudly. "Quote them the accuracy figure! They won't believe it!" So for the record, the quoted count accuracy is 30 per 1,000,000 and even that has been bettered in many installations.

For more information about the Can Counters, or Totalizers, tick the box on the reply sheet.



Smooth copper speed control

Sencon recently installed Area Mass Sensors at a canmaking plant in Europe. The plant had previously been using standard proximity sensors to control the speed of their copper by switching it to one of a number of discreet speed settings.

So what's the problem with that? "It's just less finely tuned to the real demand for cups from the bodymakers," says Ian, from Sencon technical support, "so this proximity sensor method can only allow the copper to switch between a small number of discreet speeds. It is often difficult to run at just the right speed, so the copper supplies too many or too few cups, overcompensating for small changes in demand as the back-up goes past individual sensors."

These unnecessary step changes in speed contribute to day in, day out wear, as the copper speed is switched up and down.

"Worse than that," says Ian, "one of the discrete speed settings with that method is going to be 'no speed', so the copper will take short stops, then restart, and the quality of cups after a restart is a little less good

when compared to normal running. Short stops are just not ideal for a cupping press, if possible they are to be avoided."

The inverse also occurs, where slight exaggeration of demand makes over-delivery to the mass conveyor possible, leaving some cups to cycle round on the

mass conveyor for too long, drying their lubricant and increasing the

chances of wrecks in the bodymakers.

"Sometimes, an overfed mass conveyor will become so pressurized that some cups pop out of the mass, sometimes called 'boiling'." This can lead to cups inverting when they fall back into a gap when the pressure dies down. The resulting upside down cups entering the bodymaker cause bodymaker downtime, wrecks or even tooling damage.

"So, as line speeds increase, flow control is becoming more and more important.

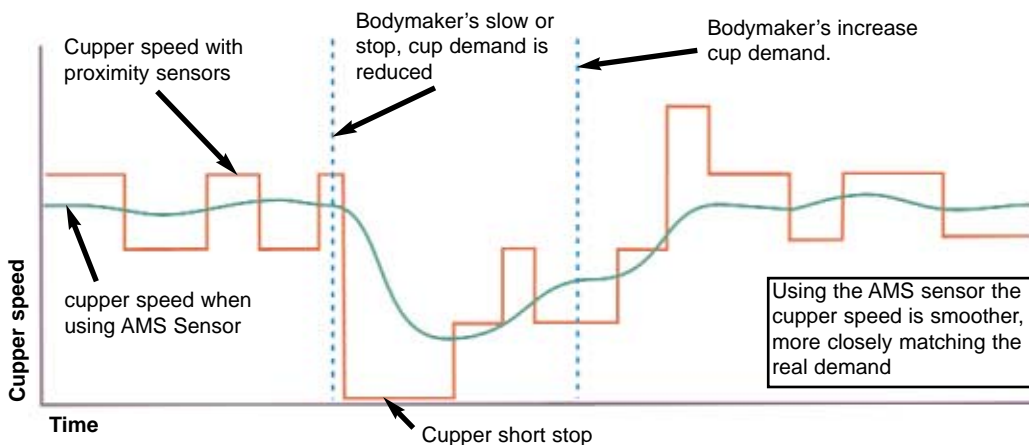
Basically, with an AMS installed, the modulated copper speed tracks the actual demand for cups far more closely than was ever possible before.

"With an AMS, the Area Mass Sensor, the speed changes are smooth and don't over-compensate as conditions on the belt change. Instead of a step change when an individual proximity sensor is covered, you get an analog voltage output directly proportional to the actual density of cups across the cup mass belt." So the copper speed will be smoother, and more precise? "Absolutely! It makes everything much more stable and consistent, as the plant who installed it the other day has found out.

"You can also use the AMS on the palletizer," continues Ian, "to make sure there are no gaps in your layers. And it's designed to go in at the washer in-feed. On the washer it stops cans falling over by accurately modulating the mat speed, so it maintains your target can density and wash time."

"that all increases the chances of wrecks in the bodymaker"

"with an AMS installed, the modulated copper speed tracks the actual demand for cups far more closely"



For more information about the Analog Area Mass Sensor, tick the box on the reply sheet.

NORTH & SOUTH AMERICA
Sencon Incorporated,
6385 W. 74th Street,
Bedford Park, IL 60638, USA.
Telephone: +1 708 496 3100
Fax: +1 708 496 3105
Email: sales@sencon.com

EUROPE • MIDDLE EAST • ASIA
Sencon (UK) Limited,
Unit P, Blackpole East,
Worcester WR3 8SG. United Kingdom.
Telephone: +44 1905 755525
Fax: +44 1905 456393
Email: sales@sencon.co.uk

FRANCE - SPAIN
Parc Club Bât.21
1025, rue Henri Becquerel
34000 Montpellier, France
Tél: +33 4 99 13 37 20
Fax: +33 4 99 13 37 21
Email: france: vente@sencon.fr
Spain: venta@sencon.es

www.sencon.com

www.sencon.net

www.sencon.fr