Case Study

Raja Udyog improves productivity and reduces wastage with AlygnAXIS

Background

Established in 2002, Raja Udyog Pvt Ltd., is a fast growing company operating in the FMCG sector in India. The mainstay of the firm is a range of biscuits and bakery items which are produced in its state-of-the-art automated facilities. Raja Udyog also has a flexible printing and packaging division at Noida for manufacturing high quality packaging material for its products.

Challenges

Increasing raw material costs, demand for better print quality, reliability, and accuracy in printing made it necessary for Raja Udyog to explore technologies that would help it to reduce waste and improve print quality.

Raja Udyog uses an 8 colour rotogravure printing (MLS) machine that runs at a web speed of 150 metres per minute (mpm). In an eight hour shift, Raja Udyog uses approximately 1000 kg of printing material. The biggest challenge faced by the company was the wastage of material to the tune of 6% during the start-up due to mis-registration, thus resulting in a loss of around 60 kg of material per shift.

Mr S N Pandey, a senior operator at Raja Udyog with over two decades of experience said, "We were not able to run the machine at 150 mpm as we were very concerned about registration errors. We had to deploy an operator at each print station for monitoring errors. Increasing speed led to greater rejection, and we had to print more to make up for the wastage."

After evaluating numerous options, Raja Udyog approached A.T.E. for a precise and consistent automatic register control solution.

Solution

After a detailed study, A.T.E. proposed its next generation AlygnAXIS register control system. Designed to improve productivity with maximum operational flexibility, AlygnAXIS was the perfect fit to address Raja Udyog's problems.

About AlygnAXIS

A.T.E.'s AlygnAXIS is a compact automatic register control system. Its reduced hardware results in longer mean time between failures (MTBF). The AlygnAXIS has ATEX-certified fibre optic sensors that make it safe to use in explosive environments. The intelligent fibre optic sensor senses the error and sends the correction signal to the controller. The AlygnAXIS' user-friendly GUI helps operators identify registration errors even at high web speeds. The quick response output signals control the length, and the side control mechanisms correct the register rapidly.
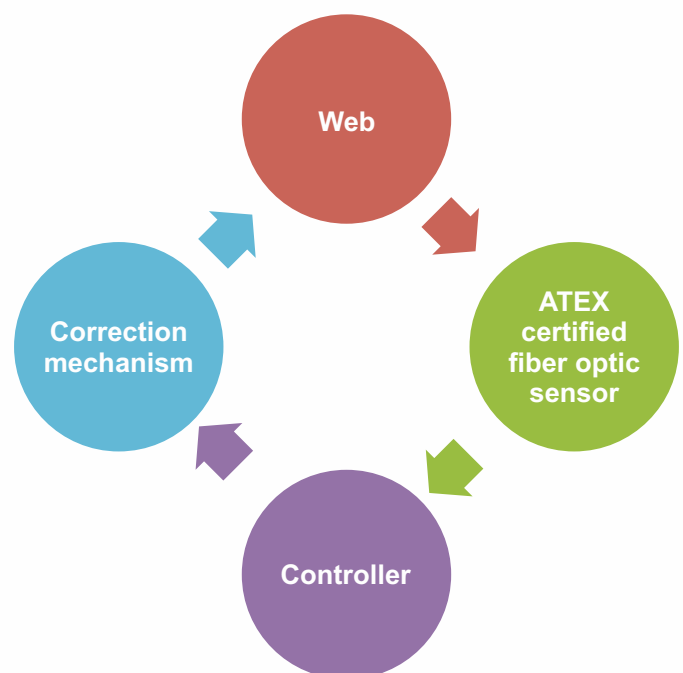
AlygnAXIS register control system process

A.T.E.'s AlygnAXIS also has automatic mark recognition, pre-setting, and several other features that help reduce waste during the start-up, ramp-up, and ramp-down phases of production. The online chart recording and the key colour/previous colour measurement modes increase versatility and allow them to adapt to the needs of a printing job. AlygnAXIS can also save and recall all settings of previously printed jobs.

Result

Raja Udyog are delighted with the performance of the AlygnAXIS.

- Substantial reduction in waste due to registration errors: from 6% to 2%
- Significant increase in machine speed: from 150 mpm to 180 mpm
- Improved product quality
- Improved productivity
- Saving in labour – no need to deploy operators to manually check quality at each print station

Mr A K Jaiswal, Plant Head, Raja Udyog, Noida

"The best thing about AlygnAXIS is that it is very compact and easy to operate. Till date there was no need for any repairs to this product. The fibre optic sensors are very accurate, the light source is good. Even colours like light yellow, silver are generating visible spikes on the GUI. I appreciate A.T.E.'s commitment and apt problem solving. A.T.E. has not only given us a product, but also offered a complete solution to solve our problems."