



Global Plastics Manufacturer uses MPERIA® to automate customer-specific coding, reducing errors, labor and consumables costs

Objective

A global manufacturer of custom colored acrylonitrile butadiene styrene (ABS) thermoplastic sheets in a continuous web line fabrication process sought to replace its existing process of manually applying paper labels to its products as a means to offer customer-specific branding as well as to mark production traceability codes (lot and date) and direction of travel arrow. The labels were both labor-intensive to apply and prone to delamination (thereby eliminating product traceability) due to the heat involved in the manufacture of the thermoplastic sheets. Further, they wanted to eliminate the ongoing materials costs associated with purchasing the labels and disposing of their waste paper backing after application.

For those reasons, the company sought an in-line, dual-sided laser marking and coding solution that could be implemented across—and manage—all six of its facility's production lines, running at speeds of 25 feet per minute. It was also critical to preserve the existing programmable logic controller (PLC)-based production keystrokes and customer-specific messaging information in the transition.

Summary

A global plastics manufacturer needed a more efficient way to provide customer-specific branding on thermoplastic sheets. Their manual process of applying paper labels was costly, inefficient and error-prone. Matthews Marking Systems provided a laser marking system, managed through the MPERIA platform, to automate brand-specific coding across all their production lines. Production data from their existing PLC now drives the automatic creation of customer specific codes, eliminating manual input errors and increasing productivity. The company reduced their consumables spend by \$65,000 a year, and saved \$100,000 in labor costs.



**Matthews
Marking Systems™**

Americas | Pittsburgh, PA | O: 800-775-7775 | www.matthewsmarking.com
Asia | Beijing, China | O: +86. 10.8879.6525 | www.matthewsmarking.cn
Europe/Australasia | Mölndal, Sweden | O: +46.3 1.338.7900 | www.matthewsmarking.se
Germany | Aschau, Germany | O: +49.80.5295 110 | www.matthewsmarking.de



Matthews' Solution

After a two-week demo, Matthews implemented the e-SolarMark+ CO2 laser marking system with 30-watt laser output. Two units, placed at the web-edge of each of the six production lines, mark customer-specific branding and traceability codes in line as each new job begins. Because multiple customer jobs might run on a single production line, the laser markers can be manually positioned with trimmer knives at the beginning of each job—per the manufacturer's specification.

The total package is controlled by MPERIA®, Matthews' marking and coding automation platform. MPERIA drives the lasers and communicates production data to and from the customer's existing PLC-based human-machine interface (HMI). The HMI was reprogrammed on-site to include a new print preview and confirm step. This eliminated the need for new controllers and allows each laser mark code to be verified and approved by the line operator as jobs change. With MPERIA, operators' inputs are automatically transmitted to populate variable data fields in the existing laser message template, reducing errors when creating message content.

Further, MPERIA serves as the central message management platform for all six production lines in the facility, allowing the facility to drive all printing devices from a single interface, and remotely manage message changes per order. It also lets the management team to run laser status and production reports to identify improvement areas for increased profitability. To minimize operational disruptions, the full system was installed line-by-line over a period of two years.

Results

With the new Matthews MPERIA-driven laser marking system, the manufacturer was able to eliminate the cost of the labels, an annual expense of \$65,000. Additionally, the laser marking allowed them to offer customer-specific brand marking as an option to help their customers differentiate themselves within their markets, creating a new revenue stream generating approximately \$150,000 a year.

Further, because the marks are placed directly on the edge of the thermoplastic sheet instead of on a label, the branding and traceability codes are permanent. Perhaps most significantly, the branding and coding information is marked automatically, with no human intervention. This allowed the manufacturer to reallocate existing labor resources to other, more value-added activities elsewhere within their facility, saving \$100,000 in labor costs. All of these savings contributed to a total return on investment of less than two years.

“The company reduced their consumables spend by \$65,000 a year, and saved \$100,000 in labor costs.”



MPERIA® Controller



Matthews Marking Systems™

Americas | Pittsburgh, PA | O: 800-775-7775 | www.matthewsmarking.com
Asia | Beijing, China | O: +86. 10.8879.6525 | www.matthewsmarking.cn
Europe/Australasia | Mölndal, Sweden | O: +46.3 1.338.7900 | www.matthewsmarking.se
Germany | Aschau, Germany | O: +49.80.5295 110 | www.matthewsmarking.de