

# Thermo Scientific 21Plus!

## Measurement and control system

Providing American Packaging Corporation with greater product insight and improved quality

### American Packaging Corporation

American Packaging Corporation is the 10th largest flexible packaging converter among the US top 100 and for over 100 years has serviced a broad range of markets, producing award-winning packaging for some of the world's best companies.

Their Rochester, New York, facility specializes in complex extrusion and adhesive laminations that include more than 125 combinations of raw materials and resins. The plant offers the latest technology in complex barrier laminations of films, foils, papers and resins.

The tandem extrusion laminators can produce up to five layer laminations with the unique capability to adhesive laminate one of the layers in one pass. Additional capabilities include extrusion applied hot melts, non-foil barrier coatings with in-line

adhesive lamination, die cutting of roll-fed lidding, along with wide web flexographic printing up to six colors.

### Web gauging benefits and results

Benefits achieved through the use of the Thermo Scientific™ web gauging system were as follows:

- Accurate, timely quality information
- Reduced quality variation from the extrusion line due to high-resolution sensors, fast scanning and narrow data-box profiles
- 30% improvement in quality relating to product variation
- 20% decrease in start-up times
- 20% decrease in product change time
- Estimated payback period was less than one and a half years

“We are now able to make products that previously we were unable to make. We have improved our quality and production efficiency. Better still, we have been rewarded with greater customer satisfaction.”

Andy Beckman, American Packaging, Rochester, New York



## A focus on quality

The objective of American Packaging's web gauging project was to improve quality and was driven by their plans to make more demanding products. While their existing legacy gauging system was just ten years old, it was unable to pinpoint their quality problems. Quality problems often went undetected. The existing system did not optimally present profile streaks, due to the large spot size of the sensors and the wide data box measurement zones. Additionally, the system's slow scan speed meant that machine direction disturbances were not measured properly and restricted the control effectiveness. Quality variations were simply being 'integrated out' of the picture.

American Packaging decided that it was time to evaluate their options. Their experience enabled them to

clearly define their requirements for a new web gauging system. They wanted to see greater product quality detail along with tighter control, and were looking for advanced machine direction and profile controls.

## A system designed to deliver

Quality The extrusion coating line at American Packaging's Rochester, New York, facility is capable of manufacturing a wide range of products. Therefore, a measurement and control gauging system was configured to specifically address this application.

The Thermo Scientific™ 21Plus! system installed on this line comprised three scanners to measure basis weight at the cast end of the line, as well as prior to and following the coat station, including optimization controls and operator stations.

Basis weight variation was reduced considerably by positioning a scanner at the cast end of the process due to shorter process delay times. Profiles from this part of the process are used to supervise the extruders' auto-die actuators with the Thermo Scientific Advanced Profile Control (APC) optimizer. Control was faster and tighter with substantial quality improvements. The operator interface displays were quickly accepted by the crews and generated greater process knowledge and improved operations.

## A reliable system with low cost of maintenance

The Rochester facility has had good experience with their 21Plus! since installing their system. The commissioning went very smoothly resulting in a fast turnover to the plant. The system has since been robust and reliable, without a single call for service in the past year.



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