

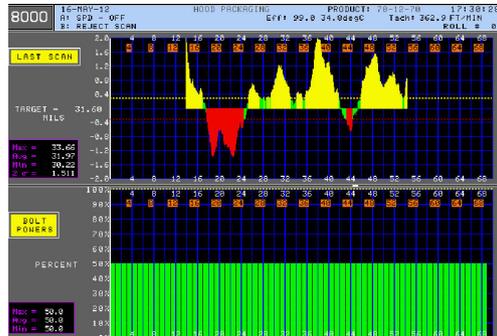
NDC 8000 TDi WEB GAUGING SYSTEM

“NDC achieved more in one hour than the previous web gauging system supplier did in three weeks”

Brian Steinwagner,
General Manager,
Hood Packaging,
Arden Hills
Minneapolis, MN



Quality Results for Hood Packaging Flexible Packaging Measurement and Control



Profile variation before control on 32lb product is ± 1.5 lbs or $\pm 4.7\%$

Hood Packaging Corporation has a rich history in North America as a key player in the packaging industry. For more than 50 years the company has been a leader in the design and manufacture of a wide range of packaging materials. Hood Packaging has evolved to become a world leader in the converting industry by providing reliable customer service, on-time deliveries, and superior product quality.

At the end of March 2012, Hood Packaging began commissioning their new Number 1 line in Minneapolis, MN to manufacture the following products:

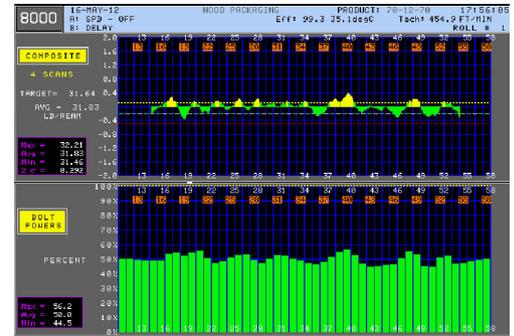
- PP/extrudate/PP (Extrusion Lamination)
- Foil/extrudate (Extrusion Coating)
- Paper/extrudate (Extrusion Coating)
- Paper/Poly/Foil

The new machine trims approximately 67ins. (1700mm) and was supplied with 69 diebolts for profile control.

Shortly following commissioning their new line Hood decided that the web gauging system needed to be replaced in order to meet the quality standards for their products (discussed later).

Hood Packaging Selects NDC

An order was placed on 27th April 2012 for



16 minutes after initializing NDC's APC, the profile variation is reduced by 80% to ± 0.29 lbs

an NDC 8000 TDi Web Gauging System. The system was shipped from NDC's factory on 30th April and commissioned 17th May 2012 by one of NDC's local engineering staff. Within three hours following a machine start-up, it was measuring, on control and producing quality results for Hood Packaging.

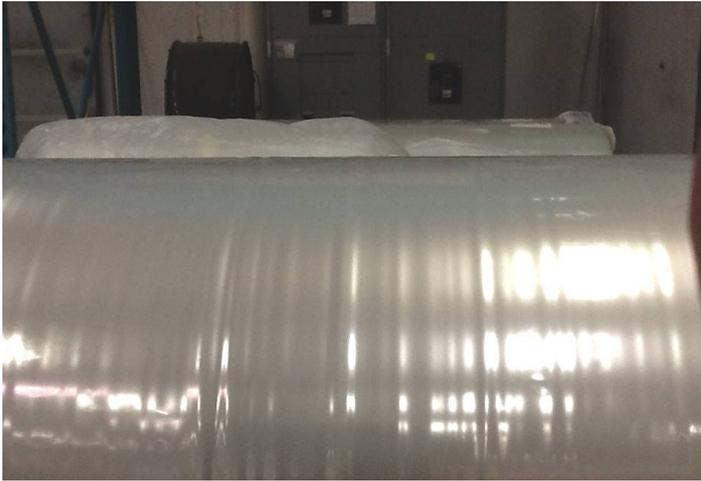
Thickness Measurement Technology

NDC's measurement solution included its Model 302 beta gauge technology. The key reason for supplying the gauge for this application was because it is unaffected by the composition sensitivity problems that influence X-ray gauges on complex products. NDC's 302 gauge met the accuracy specifications required by Hood Packaging and provided both operator confidence and the foundation for effective quality control.

Advanced Profile Control (APC)

The success of NDC's APC module is due to its precision die bolt alignment software. This includes accurate neck-in and shrinkage compensation for different products. Add to that NDC's adaptive response tuning to simplify control setup, plus accelerated response time algorithms which together provide fast, robust, tight profile control.

Hood Packaging's Web Gauging Vendor Decision



Poor roll profile structure produced by the original web gauging system with APC and an X-ray measurement gauge

Hood Packaging's Web Gauging Start-Up Experience

A web gauging system with an X-ray transmission thickness gauge and APC control was included in the original scope of supply for the new line. The key requirements for Hood Packaging's web gauging system was accurate measurement and the ability to produce flat profiles. These were regarded as essential in order to manufacture quality products from the new line. Following the start-up during March 2012, Hood Packaging experienced three issues with this system as follows:

Measurement Performance

The laboratory checks performed by the plant showed that the gauge's accuracy was unacceptable, with thickness errors ranging from 10-20%. The accuracy of an X-ray transmission gauge is a function of the product range composition and was not suitable for this application. Due to the wide product range at Hood Packaging, calibrating this gauge proved especially challenging during the commissioning of the new machine.

Because the incumbent web gauging supplier was unable to offer an alternative measurement technology, Hood Packaging elected to replace the system with NDC's beta gauge measurement technology.

Advanced Profile Control (APC) Strategy

The second issue related to the poor performance of the Advanced Profile Control software. For example, it took thirty minutes before the control began working, yet was unable to produce acceptable quality products even after two weeks of on-site engineering effort from the gauging supplier. Good APC results depend on edge of sheet detection, accurate die alignment with the scanner and an effective control strategy.

Service Support

The last issue related to service support. Responsive service from a supplier is essential, especially during the commissioning of a new line. In this situation, telephone support alone proved ineffective due to the time difference involved. In addition, the on-site support delivered later by the supplier did not solve either the measurement or APC control issues.

As a result, Hood Packaging decided to place a rush order with NDC to replace the incumbent gauging system. The system was shipped within four working days and commissioned three weeks later and on control within three hours. The same highly-competent engineer who commissioned the system lives only one and a half hour's drive from Hood Packaging's plant in Minnesota, providing further assurance to the plant in support of their decision.

NDC USA

Tel: +1 626 960 3300
enquiries@ndcinfrared.com

NDC Europe

Tel: +44 1621 852244
sales@ndcinfrared.co.uk

NDC China

Tel: +86 20 2887 3860
info@ndcinfrared.com.cn

NDC Italy

Tel: +39 0331 454 207
info@ndcinfrared.it

NDC Germany

Tel: +49 1801 977112
info@ndcinfrared.de

NDC Japan

Tel: +81 3 3255 8157
info@ndcinfrared.jp

In line with its policy of continuous improvement, NDC reserves the right to revise or replace its products or services without prior notice. The information contained in this document may not represent the latest specification and is for indicative purposes only.

Document Reference: AN-111-15417-02-2012-09
Date of Issue: September 2012
© NDC 2012

www.ndc.com

