

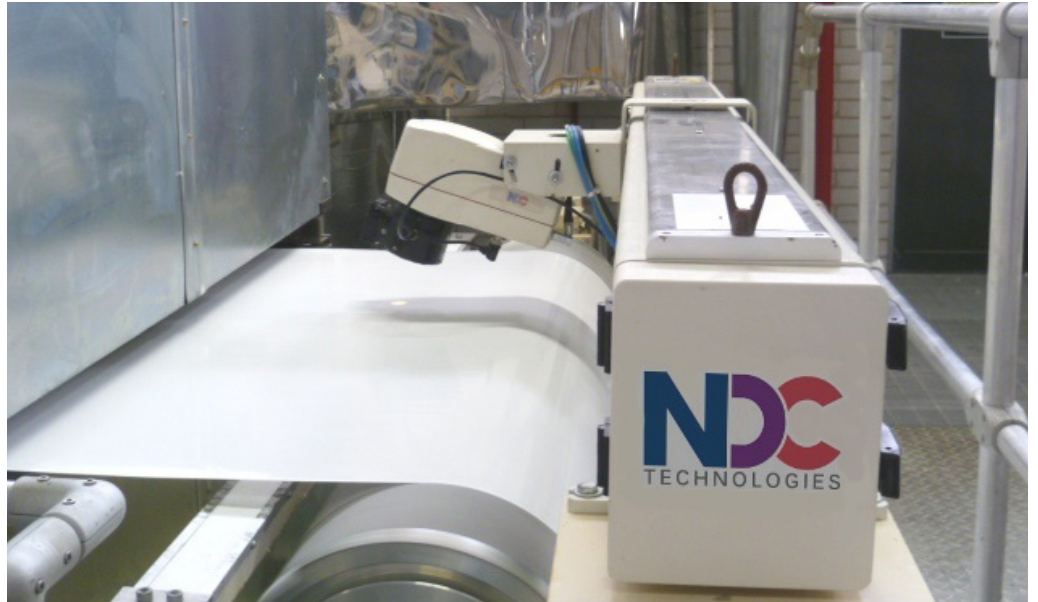
# ADHESIVE COAT WEIGHT MEASUREMENT

NDC's Adhesive Coat Weight Measurement Provides a Unique, Non-Nuclear Adhesive Coat Weight Solution for ARclad



*"NDC were able to fulfil our two measurement objectives. First was to provide a direct accurate, non-nuclear coat weight measurement and second to help us manufacture first-class, quality adhesive products"*

Mr Fernando Zuluaga,  
President, ARclad,  
Cartagena, Colombia, South  
America



*NDC710S infrared scanning sensor measuring the adhesive layer on a couche/glassine paper substrate on ARclad's Andritz BMB Line*

## About ARclad

With 30 years in the industry, ARclad, located in Medellin Colombia, is one of the leading manufacturers of adhesive paper and film products for the printing industry. This includes lithography, flexography, letterpress, rotary screen printing and digital printing. ARclad also supply a broad portfolio of products and various printing systems to other industry sectors.

## Raising the Quality Standards

ARclad Cartagena manufacture adhesive label products with water-based acrylic coatings in the range 10-30g/m<sup>2</sup>. The substrate is usually a couche and glassine paper with a range of 55-160g/m<sup>2</sup>. Alternatively, the substrate can be either a PE or PP film in the range of 23-65g/m<sup>2</sup>.

In 2010, ARclad built and commissioned a new plant at Cartagena, Colombia with a new line

supplied by Andritz BMB of Switzerland. This line trims 1.5m and makes adhesive label grades in the nominal weight range 65-190g/m<sup>2</sup>. ARclad's main objective for this new plant was to manufacture the highest quality products from day one.

## ARclad: A Green Company

ARclad adopted an across-the board philosophy to minimize their impact on the environment. This program extended across their entire operations from their nuclear source inventory to the water recycling programs that discharge into the local ecosystem.

As a key part of this program, ARclad embarked on a long-term project to replace the nuclear sensors on their legacy web gauging systems. Both ARclad and NDC Technologies worked together to transition and upgrade their existing



*Pablo de Zubiria (NDC agent Colombia), Engineer Fredy Alexander Marin Garcia (Electrical Manager), Engineer Rubiel Alzate Hernandez (Mechanical Manager) & Jonni Swerdlow, NDC Technologies Business Manager-Latin America (L to R)*



*ARclad's new factory at Cartagena, Colombia*

NDC gauges from gamma backscatter (GBS) to advanced on-line, non-contacting infrared measurements. This program itself eliminated six GBS sensors with new NDC710S infrared backscatter sensors.

Besides addressing the nuclear issue, these new sensors gave ARclad direct, fast, accurate coat weight measurement for their adhesive labels products.

**Measurement Overview**

NDC's versatile NDC710S infrared gauge uses selective NIR wavelengths to measure key value-added components in converted products. Typically this gauge measures moisture, coat weight or coating/laminate thickness across a wide range of paper,

board and film-based substrates.

The NDC710S gauge operates on the principle that water and organic products, such as coatings, absorb near-infrared light (NIR) at specific wavelengths. When exposed to NIR light, a product will absorb a proportion of this energy depending upon the quantity of active constituent that is present. The absorption measurement is compared to reference wavelength measurement(s) and converted into adhesive coating and moisture values using calibration equations from NDC's extensive applications library.

The measurement configuration of the NDC web gauging system at ARclad provides direct adhesive coat weight measurement and moisture

content after the drying oven. It also includes a wet scanning coat weight measurement before the oven and a fixed moisture measurement downstream after the oven. These measurements give ARclad a complete, real time, accurate picture of their product quality as it is manufactured.

NDC is represented in over 60 countries worldwide. ISO9001:2008 [www.ndc.com](http://www.ndc.com)



**NDC Technologies Inc.**  
Tel: +1 626 960 3300  
Email: [info@ndc.com](mailto:info@ndc.com)

**NDC Technologies sa**  
Tel: +32 4 239 90 10  
Email: [sales@ndcinfraed.be](mailto:sales@ndcinfraed.be)

**NDC China**  
Tel: +86 20 2887 3860  
Email: [info@ndcinfraed.com.cn](mailto:info@ndcinfraed.com.cn)

**NDC Germany**  
Tel: +49 1801 977112  
Email: [ndcgermany@ndc.com](mailto:ndcgermany@ndc.com)

**NDC Singapore**  
Tel: +65 91994120  
Email: [apacsales@ndc.com](mailto:apacsales@ndc.com)

**NDC Technologies Ltd**  
Tel: +44 1621 852244  
Email: [enquiries@ndc.com](mailto:enquiries@ndc.com)

**NDC Beta LaserMike**  
Tel: +1 937 233 9935  
Email: [sales@betalasermike.com](mailto:sales@betalasermike.com)

**NDC Japan**  
Tel: +81 3 3255 8157  
Email: [ndcjapan@ndc.com](mailto:ndcjapan@ndc.com)

**NDC Italy**  
Tel: +39 0331 454 207  
Email: [ndcitaly@ndc.com](mailto:ndcitaly@ndc.com)

**NDC India**  
Tel: +91 9890800697  
Email: [ndcindia@ndc.com](mailto:ndcindia@ndc.com)

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