Continuous contact-less non-destructive measurements of roll to roll process

Real-time in situ analysis to immediately adjust coating application

Compatible with transparent and non-transparent coatings, mono- and multi-layer plastics films

Resolution down to micron range or below

Versatile hardware: adjustable to film width and required measurement points across the web

Customizable software
OptiNanoPro: real time monitoring of thin film and coated films thickness across and along the web

The performance of a coating is fully dependent on its thickness and the homogeneity of its application. This is even more challenging in the case of transparent and/or nano-enhanced materials which are deposited in the range of a few microns at high speed on flexible webs.

IRIS’ OptiNanoPro monitoring system can be calibrated to measure the coating thickness and distribution as well as to detect defects in demanding roll to roll processes. It is compatible with different coating, lamination and surface treatment/engineering process requirements. It can be used on biopolymers, standard plastics, edible casings, etc.

Application examples

- Transparent biopolymer barrier coating in packaging
- Calibration against coating thickness and barrier performance
- Can help detecting defects (e.g. scratch or pinhole jeopardizing barrier properties)

Typical barrier laminate structure (source Fraunhofer)

Calibration curve

Conclusion

OptiNanoPro monitoring systems portfolio can support any roll to roll process ramp up, optimization, reduce scrap and post-production quality control needs while ensuring constant product quality.