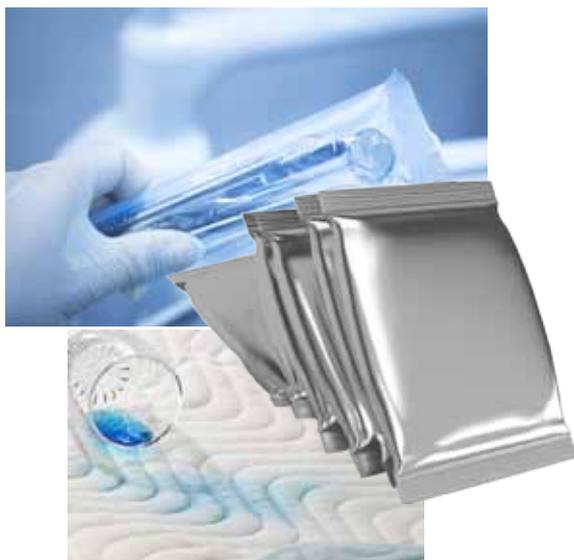


In-line Inspection of Breathable Film: Quality and Process Control for High Yields



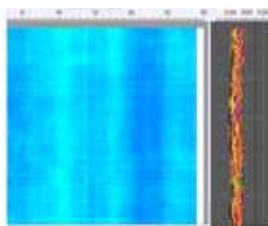
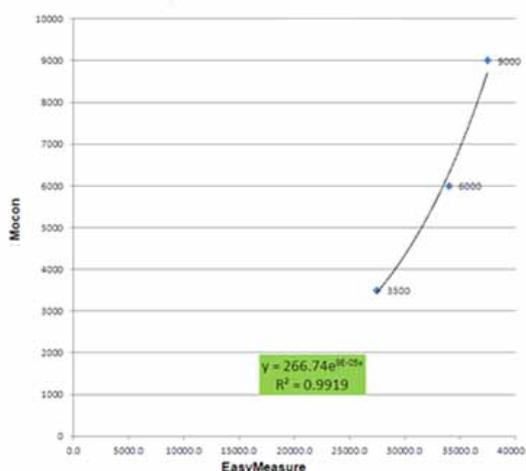
Dr. Schenk's in-line inspection system EasyInspect with EasyMeasure is the most comprehensive inspection solution for all types of breathable film.

With MIDA (Multiple Image Defect Analysis), smallest defects on the base film and the coating can be reliably detected and distinguished.

At the same time, the EasyMeasure module with its monitoring capability of 100% of the material surface controls breathability, porosity, coating homogeneity and other material properties.

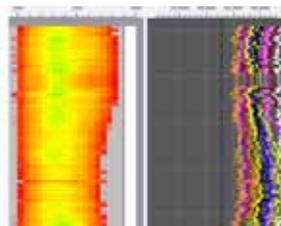
Monitoring Breathability (Moisture Vapor Transmission Rate)

The EasyMeasure module delivers an exact area trend for the breathability characteristics of 100% of the material. For example, mocon variations can be tracked with up to 65,000 gray levels, giving an exact image of the current material quality. Even smallest divergences can be reliably detected. The information is stored in a database, where it can be accessed for quality documentation. Reports can be generated for internal and external purposes.

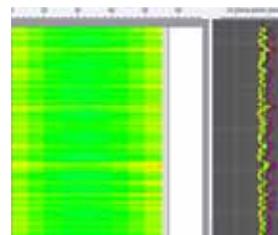


2,530 to 3,969 mocon
25,000 to 30,000 GL

GL = gray level 16 bit dynamic



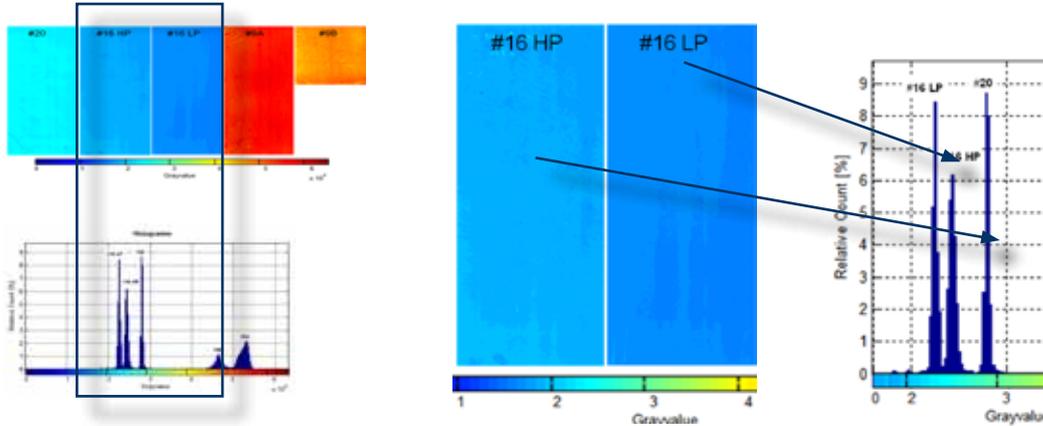
6,224 to 9,762 mocon
35,000 to 40,000 GL



4,751 to 6,810 mocon
32,000 to 36,000 GL

Monitoring Porosity with the Histogram Function

Even tiny variances in the porosity of breathable film can critically impact the functionality of the product. The Histogram function allows to detect smallest irregularities with a sophisticated statistical analysis of gray level differences. In the image below you can see the characteristic gray value distributions for different material samples with different thicknesses and porosities. A porosity difference of 10% results in a difference of approximately 1800 gray values.

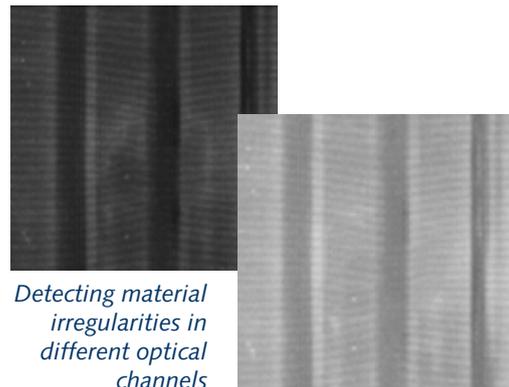


The Histogram can differentiate between materials of the same thickness, but with different porosities



Unique MIDA Inspection

With Dr. Schenk's unique Multiple Image Defect Analysis (MIDA) all kinds of breathable film defects can be fully analyzed in one inspection run. Thanks to ultra-high speed illumination multiplexing and multiple optical channels per camera line all issues can be detected and classified with more information per defect, at higher production speed, than any other inspection technology can do as of today.



Detecting material irregularities in different optical channels

About Dr. Schenk

Dr. Schenk GmbH offers inspection and measurement solutions for automated quality assurance and production process control - a key success factor in the making and converting of many materials, e.g. plastics, textile materials, nonwovens, paper, metal, or glass, for a multitude of markets like display glass, automotive, packaging, medical, renewable energy, and many more. From modular standard units to highly customized systems – Dr. Schenk's solutions have precision in focus!

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