

## In-line Inspection for Blown Film: Quality and Process Control for Higher Yields



Dr. Schenk, leading supplier of high precision inspection systems, offers a groundbreaking technology that helps blown film manufacturers and converters to combine the detection of defects with material monitoring.

EasyInspect identifies miniscule defects that can occur during the manufacturing process. EasyMeasure monitors the homogeneity of the final product's properties. The combination of EasyInspect and EasyMeasure fully ensures product quality and optimizes the blown film manufacturing process with just one system.

### Benefits of automated optical inspection and monitoring of blown film material

The innovative optical inspection solutions EasyInspect and EasyMeasure allow a comprehensive quality control (ISO 9001) to match the highly required product liability. At the same time they both help to reduce the life-cycle costs caused by poor quality products and minimize material waste during the production (ISO 14001).

For the first time, EasyMeasure allows the classification of the product quality's functional level within defect free material.

#### Blown film applications:

- Base material for converted products
- Agricultural film
- Bags
- Packaging film, food wrapping
- Laminating film
- Barrier film

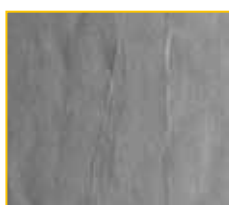
#### Blown film defects:

- Gels/fisheyes
- Air bubbles
- Die-lines
- Weld-lines
- MD scratches
- Carbon speck (die pickoff)
- Insects
- Tears
- Melt fractures
- Wrinkles (MD and diagonal)

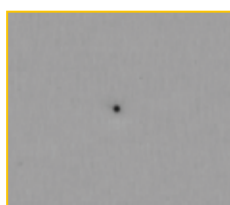
Die-line



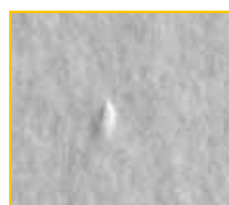
Wrinkle



Particle



Bubble



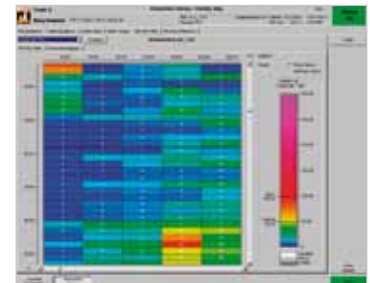
## Ensure your product quality and optimize the blown film manufacturing!

EasyInspect applied to blown film identifies defects and irregularities that can occur in the base material production process. The system's innovative optical set-up and its image processing and visualization software have been adapted to the specific requirements of blown film. Proven as highly reliable, EasyInspect convinces by the following highlights:



- Advanced camera and illumination technology for highest contrast, sensitivity and optimized resolution
- Reliable and accurate classification of defects
- High defect sensitivity with bright-field and dark-field channels
- Easy integration into production lines
- Standard components for an optimal price/performance ratio
- User-friendly interfaces according to SEMI standards
- Networking for further evaluation

EasyInspect combined with EasyMeasure allows full control over the manufacturing process and the end product. Together they support you significantly in



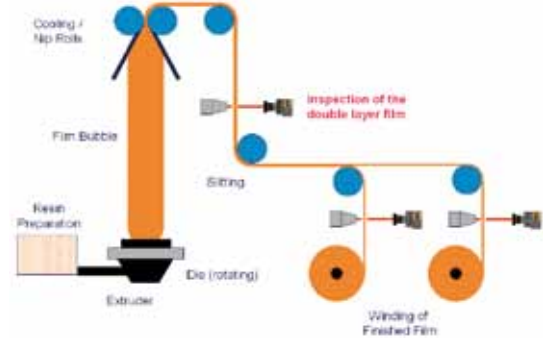
- establishing consistent quality standards by rejecting material with irregularities from the further production process,
- improving yield by quickly identifying the source of a defect and eliminating the problem immediately and
- gaining in-depth knowledge of the production process by quality documentation, history and statistic reports.

## EasyMeasure

### Monitoring for 100% control in the production of blown film

**Clarity/Haze Monitoring:** enables to monitor non-homogenous mixture of granulate with master batch.

**Gloss/Reflectance:** This add-on option controls surface distortions (applesauce, orange peel, shark caused by bad resin, die lip issues or melt fracture among other reasons).



#### About Dr. Schenk

Dr. Schenk GmbH, established in 1985, is a global innovative high-tech company based in Munich, Germany. For the third decade now, the range of products and services offered by Dr. Schenk comprises comprehensive solutions for automated quality assurance and production process monitoring for the solar, flat glass, film and foil, converting, optical media and semiconductor industries.

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