

Glass Inspect

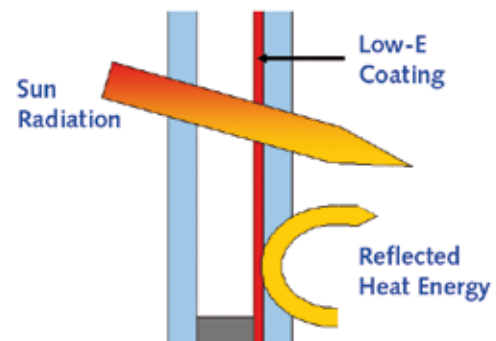


Detecting Coating Defects & Irritating Discolorations in Low-E Glass with just One System!

INTRODUCTION

Low emissivity (Low-E) coatings are used in window glass to stop heat radiation. Manufacturers of these products face a growing pressure to deliver panels with perfect functionality and flawless cosmetic appearance.

Dr. Schenk, provider of inspection and measurement systems for the glass industry offers a solution dedicated to Low-E coated glass that cures the most sensible quality issues of these high-end architectural products.



Schematic design of a Low-E window

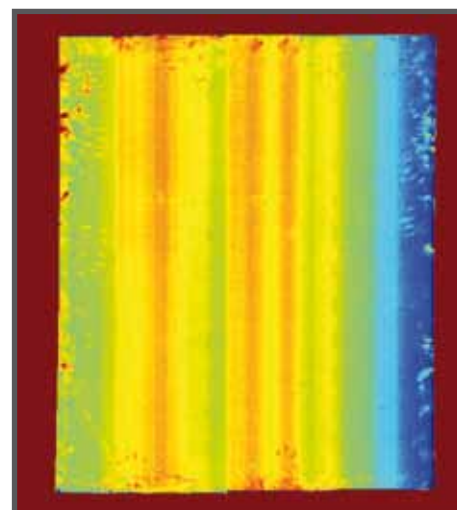
DEFECT DETECTION AND COLOR MONITORING FOR HIGHEST LOW-E GLASS QUALITY

Local defects like voids, crazing defects and pinholes in the coating layers can reduce the panel functionality. Even more critical for architectural applications, they also distract the view through the panel. Dr. Schenk's GlassInspect solutions have therefore been geared to the special quality needs of Low-E glass and detect defect types typical for this application with an enhanced reliability and precision. Innovative GlassMeasure options additionally locate coating thickness variations and monitor parameters to support a stable production process.

Low-E glass manufacturers might face costly after-sales issue if panels of a complete building front show an inhomogeneous color appearance. With the brand new and innovative Color Space Measurement, this problem can be cured by evaluating the tristimulus values from $L^*a^*b^*$ color space coordinates (CIELAB).



Crazing defect in Low-E coating detected by GlassInspect

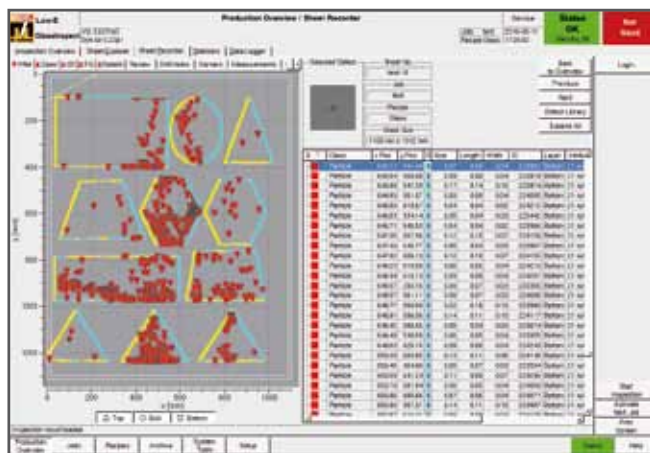


GlassMeasure monitors the homogeneity of the layer thickness, providing instant feedback on the coating process

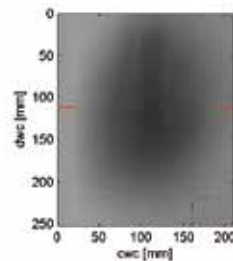
KEY FEATURES AT A GLANCE

- High resolution CCD line scan cameras and high performance LED illumination units
- Realistic, high resolution 2D and 3D images of defects via the intuitive visualization software
- Defect classification optimized for low-e coated glass
- Inspection of glass panels regardless their form with automatic edge detection for rectangular glass sheets
- Optional edge detection for free formats like triangle, parallelogram, circle
- Easy integration into production lines
- Advanced analyzing and processing software based on SEMI standards

Inspection of Low-E coated glass regardless their form



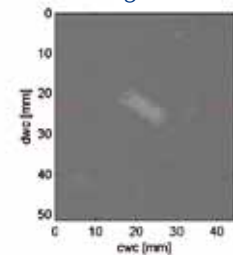
Cathode defect



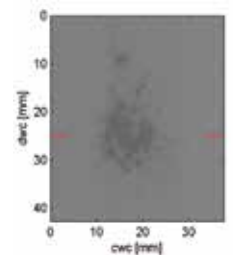
Pinholes



Coating Void



Stain



OPTIONAL MEASUREMENT CHANNELS

- 100% IR layer homogeneity monitoring of the full panel
- 100% (L*a*b*) color space monitoring of the full panel
- Calibration with spectral data provided by an optional spectrometer or even an external customer spectrometer

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