Osprey® by LiteSentry™ Distortion Measurement System

APPLICATIONS

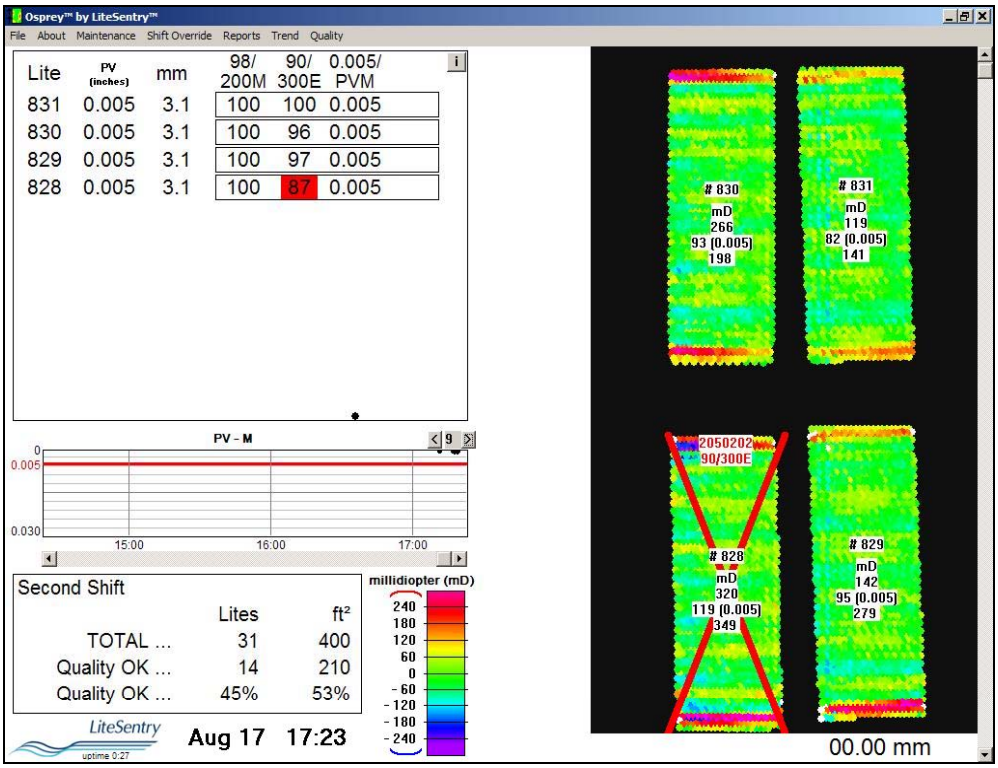
- **Tempering**
- **Lamination**
- **Heat Treatment**
- **Solar**

FEATURES

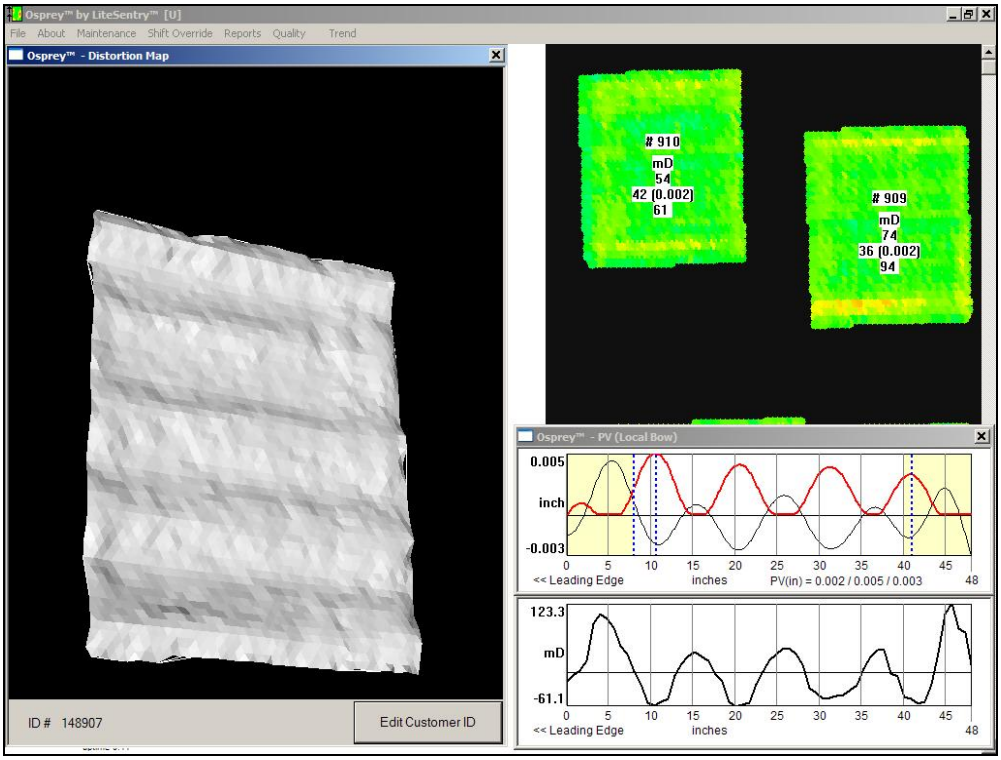
- **Measures Optical Distortion in heat-treated glass.**
- 100% inspection assures compliance to specifications.
- True optical measurement in lens power (diopters) as seen by the customer!
- Measures all types of optical distortion including roll wave, edge kink, local bow, pocket, side kink, hammer, bird's eye, picture framing, belly banding and others.
- Thickness and area of glass measured and recorded.
- Cumulative throughput and yield by shift is displayed.
- Rugged, production-ready measurement tool.
- Complies with ISO EN 12150-1 and ASTM C14 standards.
- Replaces off-line inspection.

BENEFITS

- Correct distortion problems before adding value in IG or Lamination.
- Real-time inspection. Results displayed immediately. Allows for improved process control.
- Improves quality and reduces field returns.
- Increases throughput 10% to 33% with improved load utilization.
- Improves yield and decreases quench breakage.



Operator Interface



Pop-up Detail displays 3D Topography (L) and 2D Side Profile (R)

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Specifications

Osprey® by LiteSentry™ Distortion Measurement System

Application: Batch or continuous tempering lines, float lines.

Substrate: 2 to 19 mm thick glass; clear, hard or soft coat low E, tinted, or reflective

Inspection area: 500 to 3,210 mm (20 to 126 inches) conveyor widths

Operator interface display

- Distortion in optical lens power in mD (millidiopters) and peak-to-valley (inch) or local bow (mm).
- Pop-up 3D visualization shows optical topography and 2D view of side profile.
- Color-coded distortion mapping.
- Statistical results for each glass sheet.
- Quality and throughput statistics by shift.
- Trend graph for performance over time.

Outputs

- Local and remote displays provide immediate feedback to operators.
- Database of all results by piece. Open-source 'XML' output supports all databases.
- Report writer for data analysis. Sort by date, time, thickness, sheet area, and location on conveyor.
- Direct feedback to furnace may provide closed-loop adjustments.

Optical system

- CCD camera G with microsecond frame capture
- Lighting and optics provide dynamic measurement of optical distortion
- Measurement resolution: 0.002 diopter (2 mD) at 300 mm/second (700 ipm) substrate velocity.
- Measurement range: -550 to + 550 mD
- Measurement accuracy: bias <= 15 mD at -200 mD to +200 mD*
- Measurement repeatability: +/- 30 mD average over -200 mD to +200 mD range with confidence interval of 99.7%*
- Thickness sensor accuracy: +/- 0.08 mm (+/- 0.003 inch)

* Dynamic with substrate moving through system. Reference Osprey Accuracy Test Report.

Environmental

- NEMA 12 enclosure with integral air conditioner for severe industrial environment.
- 4-50 deg C (40-122 deg F).
- Vibration isolation.

Osprey® stands over output conveyor

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Patented