

Osprey[®] by LiteSentry[™] Distortion Measurement System

OSPREY 在线高精度玻璃畸变光学检测系统

APPLICATIONS(应用)

- Tempering(玻璃钢化)
- Lamination(玻璃层压)
- Heat Treatment(玻璃热处理)
- Solar(太阳能电池玻璃检测)

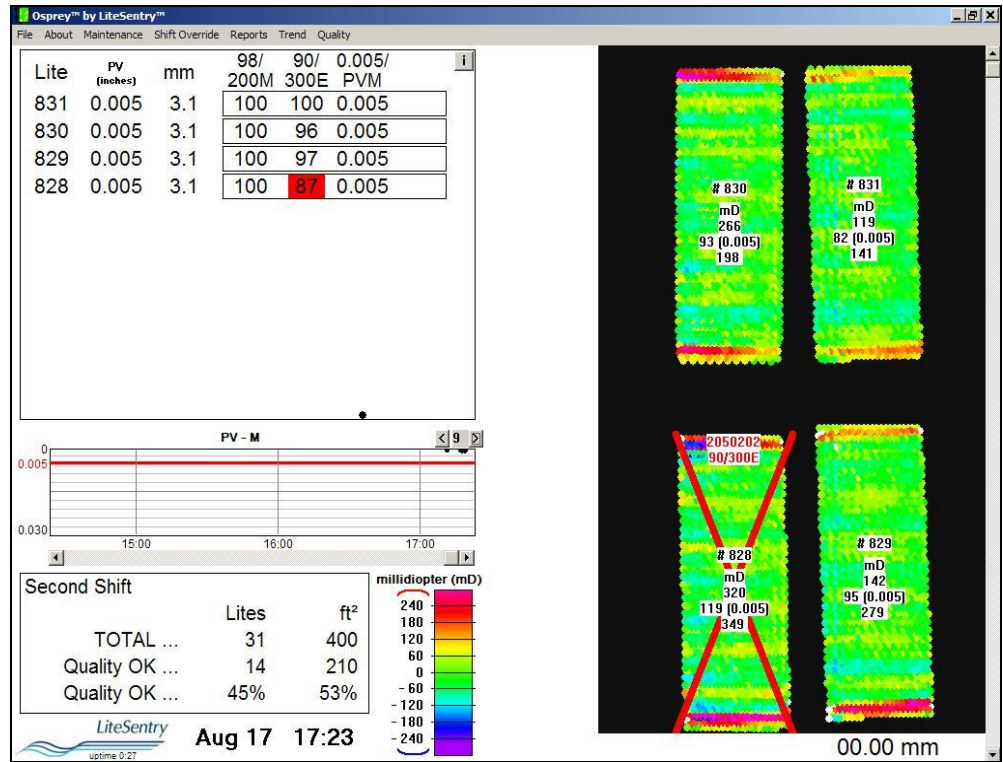
FEATURES(特性)

- Measures Optical Distortion in heat-treated glass (测量热处理后玻璃的光学畸变程度).
- 100% inspection assures compliance to specifications (整块玻璃实时全监测确保玻璃畸变程度在允许范围内).
- True optical measurement in lens power (diopters) as seen by the customer (直接屈光度测量, 实同人眼观测).
- 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 (检测所有生产过程中造成的光学畸变, 包括滚动波, 边角弯曲, 边沿弯曲, 区域弯曲, 微小凸凹, 等等).

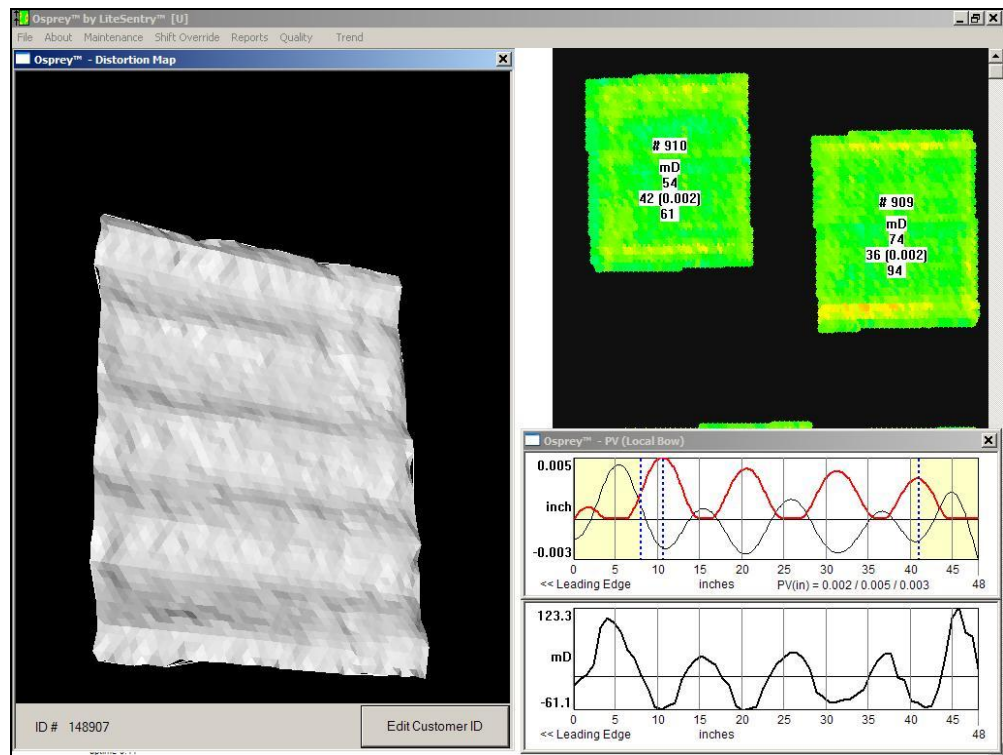
- Glass thickness measured and recorded(测量玻璃厚度并记录).
- Cumulative throughput and yield by shift is displayed (玻璃日月年产量实时显示).
- Rugged, production-ready measurement tool(工业级在线实时监测仪器).
- Complies with ISO EN 12150-1 and ASTM C14 standards (符合 ISO EN 12150 和 ASTM C14 标准).
- Replaces off-line inspection (测量精度取代实验室离线检测仪器).

BENEFITS(益处)

- Correct distortion problems before adding value in IG or Lamination (在玻璃层压或中空前校正畸变, 降低损失).
- Real-time inspection. Results displayed immediately. Allows for improved process control(实时监测, 结果即时显示, 为控制提供实时数据).
- Improves quality and reduces field returns(提高玻璃质量, 减少次品).
- Increases throughput 10% to 33% with improved load utilization (提高生产流量 10%到 33%).
- Improves yield and decreases quench breakage(提高产量降低淬火损失).



Operator Interface



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

LiteSentry Corporation

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Specifications (技术指标和参数)

Osprey[®] by LiteSentry[™] Distortion Measurement System

Application (应用): Batch or continuous tempering lines, float lines (玻璃回火, 或浮法生产线).

Substrate (可监测玻璃): 2 to 19 mm thick glass (2 到 19 毫米); clear, hard or soft coat low E, tinted, or reflective (透明, 软硬低辐射镀膜, 有色, 或反射)。

Inspection area/glass width (检测宽度): 500 to 3,210 mm (20 to 126 inches) 500 到 3210 毫米 (20 到 126 英寸)

Operator interface display (人机界面显示)

- ◆ Distortion in optical lens power in mD (millidiopters) and peak-to-valley (inch) or local bow (mm). (用豪屈光度显示失真, 用好豪米和英寸显示峰到谷)
- ◆ Pop-up 3D visualization shows optical topography and 2D view of side profile. (3 维光学面形图和 2 光学维面形图)
- ◆ Color-coded distortion mapping. (彩色编码失真图)
- ◆ Statistical results for each glass sheet. (提供每块玻璃的统计结果)
- ◆ Quality and throughput statistics by shift. (可提供每工班的产量和质量结果)
- ◆ Trend graph for performance over time. (提供长期产品质量趋势图)

Outputs (输出)

- ◆ Local and remote displays provide immediate feedback to operators. (为操作者提供远近显示, 操作者可及时调整控制参数)
- ◆ Database of all results by piece. Open-source 'XML' output supports all databases. (可输出单块或多块玻璃检测结果数据库, XML 型式)
- ◆ Report writer for data analysis. Sort by date, time, thickness, sheet area, and location on conveyor. (结果报告可以用时间, 天, 厚度, 面积, 和生产线位置来检索)
- ◆ Direct feedback to furnace may provide closed-loop adjustments. (实时监测结果可返给玻璃熔炉做闭环控制)

Optical system (光学系统)

- ◆ CCD High resolution cameras (超高精度 CCD 视觉系统)
 - ◆ Lighting and optics provide dynamic measurement of optical distortion (专用光源和光学系统提供动态失真测量)
 - ◆ Measurement resolution (测量精度): 0.005 diopter (5 mD) at 300 mm/second (700 ipm) substrate velocity. (在 300 毫米/秒 (700 英寸/分) 速度下, 0.005 屈光度 (5mD))
 - ◆ Measurement range (测量范围): -550 to + 550 mD (-550 到+550 豪屈光度 mD)
 - ◆ Measurement accuracy (测量准确度): bias \leq 10 mD at -200 mD to +200 mD* (在-200 到+200 豪屈光度测量范围, 偏心小于等于 10 豪屈光度)*
 - ◆ Measurement repeatability (重复精度): \pm 30 mD over -200 mD to +200 mD range with confidence interval of 99.7%* (在-200 到+200 豪屈光度测量范围, 精度是 \pm 30 豪屈光度)
 - ◆ Thickness sensor accuracy (厚度传感器精度): \pm 0.08 mm (\pm 0.003 inch) (\pm 0.08 毫米 (\pm 0.003 英寸))
- * Dynamic measurements with moving substrate. Reference Osprey Accuracy Test Report. (动态测量, 参见内部测量报告)

Environmental (环境标准)

- ◆ NEMA 12 enclosure with integral air conditioner for severe industrial environment. (NEMA 12 壳体, 内带制冷器, 适用于重工业环境)
- ◆ 4-50 deg C (40-122 deg F). (使用环境 4 到 50°C(40 到 122°F))
- ◆ Vibration isolation. (自带震荡隔绝)



Osprey[®] stands over output conveyor

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Patented