

Profilometer SL

Profilometer-SL brings the Sheet-of-Light (SL) technology to Bytewise' proven Profilometer software platform to produce a low-cost, reliable, and accurate tread and sidewall extrusion measurement system. With this new instant-scan capability and portability, geometry checks on tire components can be performed quickly at any location in the factory.



Features

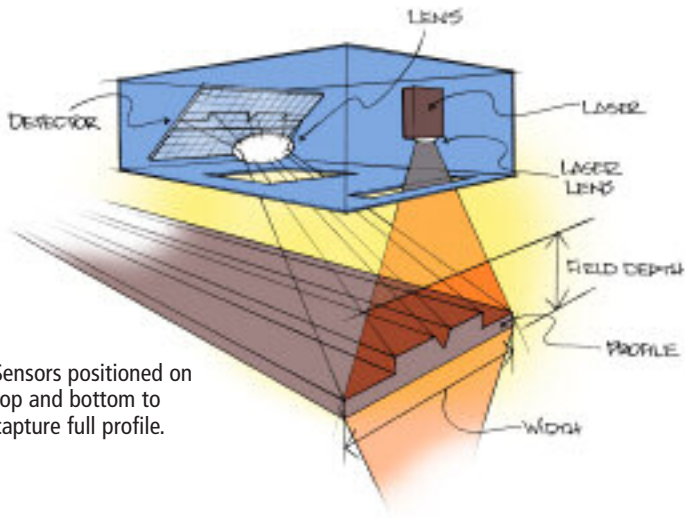
- Overlays actual measurement onto extrusion design.
- Displays and compares design and actual measurements at any point on the extrusion.
- Conicity analysis allows accurate comparison of extrusion halves.
- Regional analysis allows detailed review of specific areas.
- Statistical analysis allows export of data for analysis in spreadsheet applications.
- No moving parts
- Instantaneous cycle time
- Portable
- Same proven Bytewise software used by the top tire manufacturers worldwide.

Benefits

- Maintains the integrity of geometric extrusion profile with fewer die trials, conserving time and raw materials.
- Allows dies to be designed to increasingly tighter tolerances for materials that are more difficult to extrude uniformly.
- Identifies conicity problems early in the extrusion process, allowing for correction, and thus, saving time.
- Enables quick, easy and accurate detection of profile distortion, porosity changes, and weigh-scale drift.
- Improves quality assurance through extrusion process knowledge that can be quantified, not simply presumed.
- Results in lower costs and high reliability.
- Provides immediate feedback.
- Provides ease of mobility to any location in plant.
- Ensures a reliable, mature, well-supported measurement software platform.

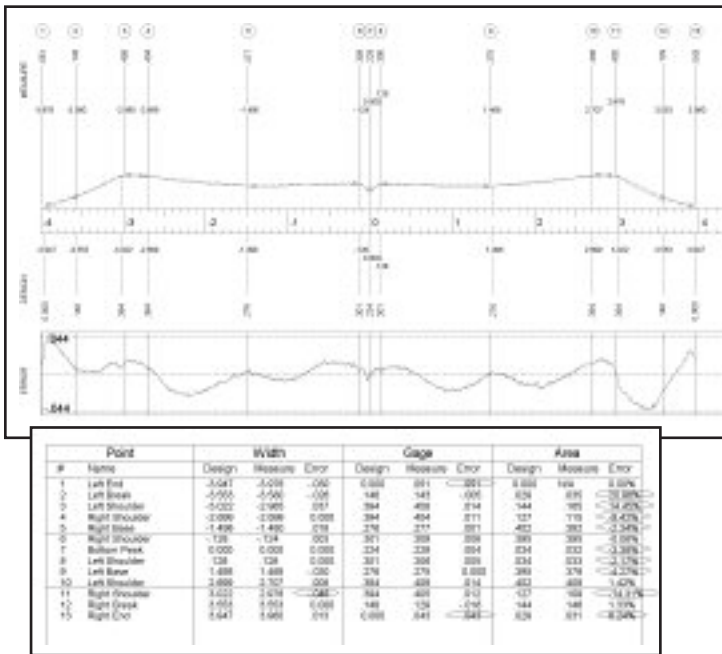
Operational Overview

How It Works



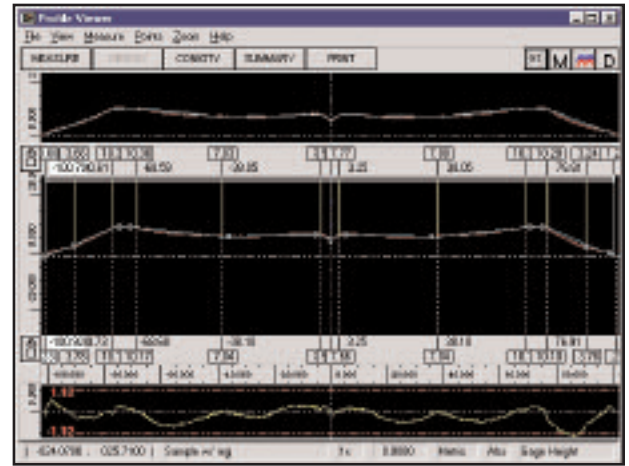
Sensors positioned on top and bottom to capture full profile.

Easy-to-Read Graphical Reports ...

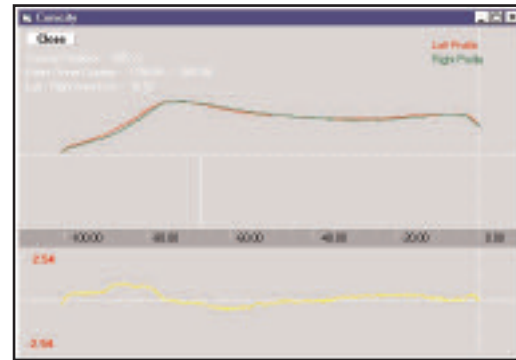


Measurement points from graphical report summarized

Software



Profile View



Graphical View of Conicity Effects

| Point | Left Profile | Right Profile | Left Profile - Right Profile |
|---------------------|--------------|---------------|------------------------------|
| Point Size | 1.12 | 1.31 | -.19 |
| 1.12 | 5.16 | 3.74 | 1.42 |
| 3.12 | 12.31 | 10.20 | 2.11 |
| 4.12 | 17.21 | 15.20 | 2.01 |
| 5.12 | 1.11 | 1.11 | 0.00 |
| 6.12 | 1.11 | 1.11 | 0.00 |
| Shoulder Width | 100.75 | 100.75 | 0.00 |
| Left Profile | 150.00 | 118.13 | 31.87 |
| Right Profile | 150.00 | 118.13 | 31.87 |
| Shoulder C/L to R/W | 28.87 | 28.13 | 0.74 |

Table View of Conicity Effects

Specifications

| Measurement Parameter | Measurement Parameter |
|-------------------------------------|---|
| Thickness Measurement Range | 60mm |
| Width Measurement Range | 300mm (4 sensors) 450mm (6 sensors) |
| Gage Repeatability of Flat Surfaces | <.025mm |
| Gage Accuracy on Flat Surfaces | <.05mm |
| Area Calculation Repeatability | <.25% |
| Area Calculation Accuracy | <.25% |
| Sample Interval (Width Resolution) | .1mm |
| Scan Speed | Instantaneous |
| Dimensions | 900mm(W) x 1070mm(L) x 1880mm(H) (with monitor at standard operating position) |
| Laser Classification | IIIa CDRH |