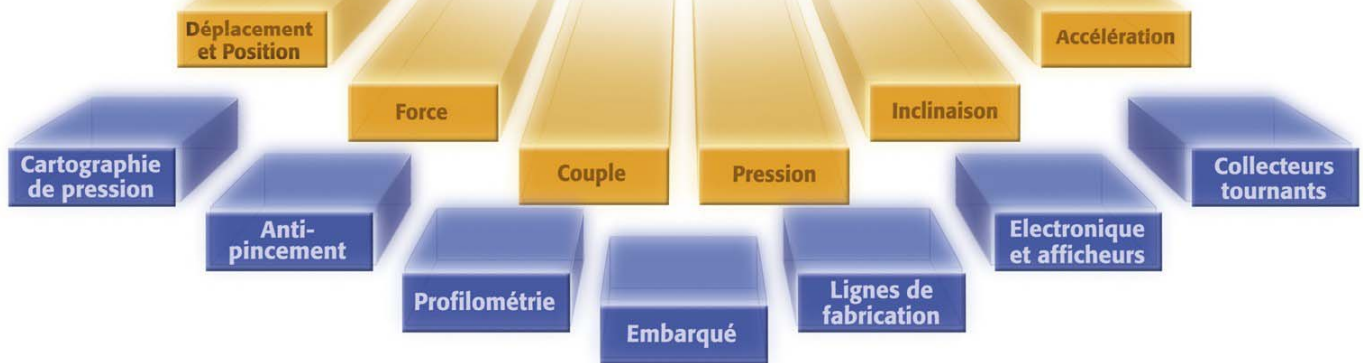




From Sensor...



...to System

Position sans contact : mesure de profil extrudé

WLS Sensor System - A high performance and affordable laser sensor system for on-line, extruded tread profiling.



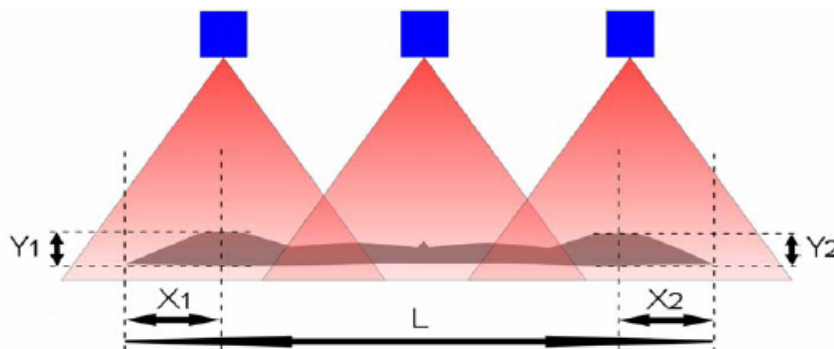
- Suitable for all grades and colours of natural and synthetic rubber.
- Measures concave parts and grooves.
- Sensors fully protected by a rugged housing.
- Integrated PC104+ based controller with optional industrial enclosure and user interface.
- Portable and easily integrated into new and existing extruder lines.
- Simple to set up, operate and maintain.

Improving extrusion quality

The WLS Sensor System from Sigmavision provides unrivalled value for online profiling of tread extrusions. Whilst many system suppliers focus on added functionality (and cost), Sigmavision offers a range of solutions with high performance sheet of light laser sensors and powerful control algorithms that are affordable by all manufacturers, large or small. This approach delivers optimum system performance at the lowest price. Benefits to our customers are to:

- . Minimise raw material wastage.
- . Improve set up times and process yield.
- . Improve product quality and consistency.

Flexibility and reliability The WLS Sensor System can be configured according to customer need. In its simplest configuration the system creates an image of the extrusion profile using a single WLS sheet of light laser sensor with a fixed reference, eg a guide roller. The PC based controller then compares the image to a preset template and the key dimensions displayed on a TFT screen in real time. For larger tread extrusions of up to 537mm width, multiple sensors may be used and the partial contours assembled to profile the thickness across the tread width.

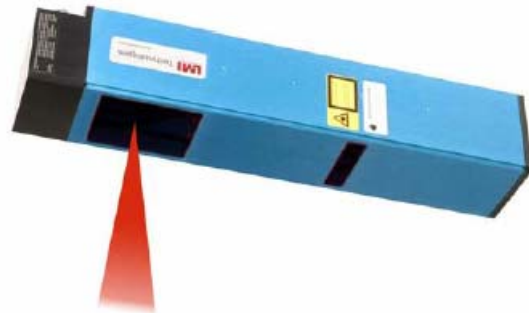


Detection of errors and deviations from the allowable tolerances allow immediate correction automatically, using real-time control signals, or by manual intervention.

Position sans contact : mesure de profil extrudé

WLS sensor

- Laser class 2 30Hz measurement frequency.
- Wide, 180mm horizontal field of view.
- CCD detector to eliminate errors due to surface texture, reflectivity and colour.
- Rugged industrial housing.
- Resolution to 0.01mm.



Controller



- Multi-drop cable configuration to connect any number of sensors to a single controller unit.
- PC104-Plus PC with 300MHz processor.
- On board applications software for system calibration, data processing and profile calculation.
- Analogue and digital I/Os.
- Rugged industrial housing.
- Controller may be integrated into existing equipment or supplied with industrial enclosure.
- Measurement accuracy to 0.05mm.

Spécifications techniques :

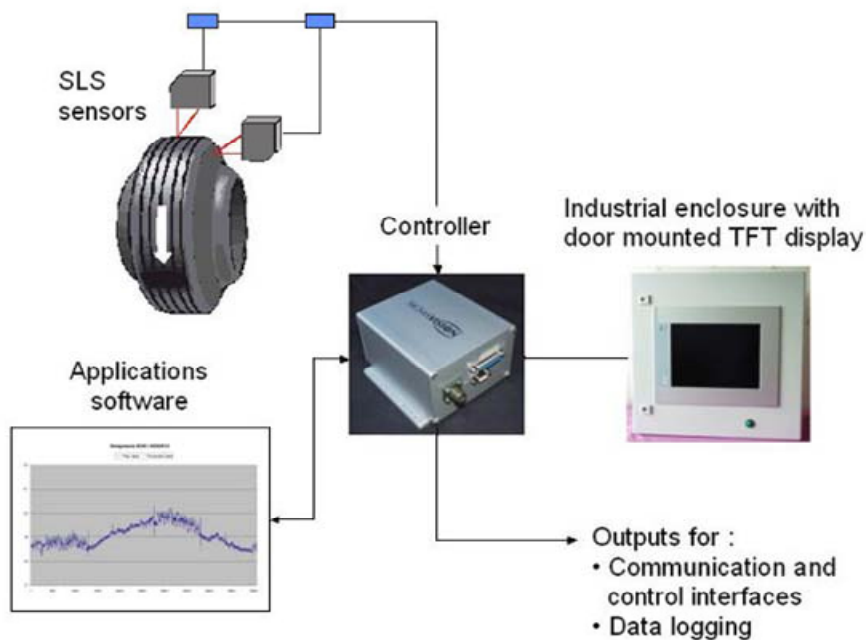
| | | |
|---|------------------------------------|--|
| Selcom WLS Sensor | Laser class: | 2 (IEC), 670nm wavelength, visible |
| | Stand off: | 293mm |
| | Measurement range: | 287mm (293mm close end to 580mm far end) |
| | Horizontal field of view: | 1 sensor: 104mm to 179mm |
| | | 2 sensors: 208mm to 358mm |
| | | 3 sensors: 312mm to 537mm |
| | Dimensions: | 359mm x 70mm x 70mm |
| | Protection class: | IP65 |
| | Sampling frequency: | 30 Hz |
| | Operating temperature: | 0-50 °C |
| Outputs: | 10/100 base Ethernet, UDP protocol | |
| Options: | Air purge | |
| Controller | Processor: | PC104+, 300MHz |
| | Power supply: | 230V AC, 50/60Hz |
| | Application software: | Data filtering, averaging, post processing |
| | | Calibration and profiling calculation |
| | System accuracy: | <0.3mm horizontal; <0.15mm vertical |
| | Communication: | Analogue or digital interfaces |
| | Options: | Rittal cabinet 500mm x 500mm x 300mm |
| Door mounted TFT display and user interface | | |

Position sans contact : mesure de profil extrudé

SLS Sensor System for radial and lateral tyre runout

The SLS Sensor System can be configured to measure radial and lateral tyre runout according to customer need. In its simplest configuration the system can measure radial runout on the tread face and lateral runout on one sidewall using dedicated, fixed mounted laser spot sensors. If required a third laser sensor can be added to allow lateral runout measurements on both tyre sidewalls.

Sensors stream data to the PC controller over dedicated RS-422 links triggered by an encoder input. Software algorithms remove sources of



System features:

- Suitable for green and cured tyres and for tyre / wheel assemblies.
- Sensors fully protected by a rugged housing.
- Suitable for integration into tyre uniformity and wheel balancing machines. Simple to set up, calibrate, operate and maintain.

