

SlabProfiler

Slab measurement system



- *True dimensional measurement of slabs*
- *Width, edge profile, length, camber, thickness*
- *Gives information about caster performance*
- *High accuracy*
- *Non contact – low maintenance*
- *World wide references*



Design for harsh conditions

LIMAB has many years experience in manufacturing and supplying precision laser measuring systems for use in harsh environments found within steel plants. This knowledge is engineered into the SlabProfiler to ensure high accuracy with very low maintenance. The system will be supplied with a high performance air cooling

system to ensure complete reliability of operation in the hot and dirty conditions that are normal for any continuous casting line. The system will meet customer mechanical and electrical requirements for a perfect integration into any steel mill.



Design for accuracy

High precision sensors are at the heart of the SlabProfiler but to ensure an accurate system the design details of all the supporting components and equipment need to be carefully considered. This is where LIMAB's experience counts by paying close attention to the overall design.

The SlabProfiler uses our proven Accura 35-2D sensors that measure both the width and edge profile. The scanning beams from each sensor are synchronized, to ensure that the width measurement is not influenced by sideways movement of the slab.

SlabProfiler

Efficient In-Line control of Slab Dimensions.

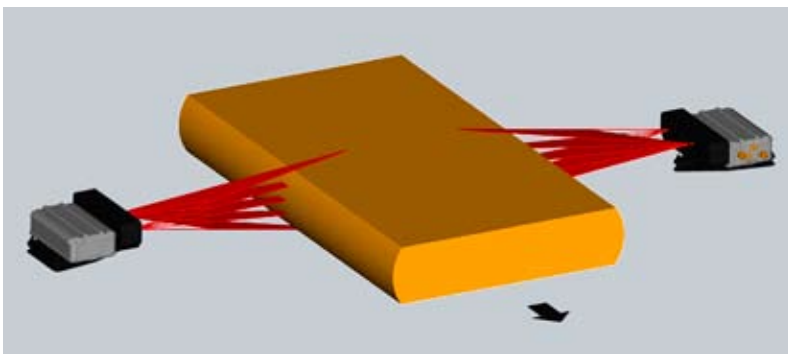
Precision in measurements are critical for controlling costs of continuous production. To address this important consideration LIMAB has developed an advanced non-contact laser system to measure the slab shape.

Laser distance and profile sensors measures width, edge profile, edge thickness, camber and a Doppler sensor measure the length. With this information the system can also calculate the slab weight.



Key Benefits of SlabProfiler

- Reduction of waste due to non-conforming production.
- Quick recognition of out of shape and dimension of slab.
- Trend graphs showing production history
- Feedback of correct slab dimension to the rolling mill.
- Control adjustable mould.
- Thickness control after grinding operations.
- Quickly identify concavity, edges and other side profile abnormalities.
- Easy integration with process control systems for communication with level 2.



Measuring method

The SlabProfiler is an in-process non contact measuring system providing high accuracy on either hot or cold materials. The system implements two of our Accura 35-2D profile sensors, which measure using the principle of a scanning laser triangulation at a rate of 2000Hz.

The laser beams are scanned in the vertical axis so that a complete edge profile is captured at a speed of 4Hz. Additional sensors can be incorporated into the system if camber or length is required.

Software key features

- Left and right edge profile graphs with shape tolerance bands
- Trend graphs of key dimensions over time
- Numeric left & right bulging display
- Numeric display of other key measurements
- Tolerance and Alarm limits with screen warnings
- Data logging
- System configuration and set-up
- Calibration
- Communication with level 2 system
- Remote service and supervision

Technical specifications

SlabProfiler

| | |
|----------------------------|------------------|
| Measurement objects | Hot/Cold slab |
| Length | 2000.....16000mm |
| Width | 600.....2000mm |
| Thickness | 40.....320mm |
| Deviation from center line | +/-100mm |
| Temperature | 0.....1200°C |
| Speed | 1.....60m/min |
| Sensor sampling rate | 2.000Hz |
| Edge profiles per second | 4 |

Measurement system accuracy

| | |
|-----------------------|------------------------------|
| Width: | +/- 2mm |
| Length: | Max 0,05% of measured length |
| Camber: | from +/- 2mm |
| Operating temperature | 0-40°C |

Cabinet and PC

| | |
|------------------|-----------------------------|
| Size | 2000x600x600 mm |
| Protection class | IP54 |
| Operating system | Windows XP |
| Processor | Core 2 Duo |
| Interfaces | TCP/IP, RS232C, Digital I/O |

Laser sensors

| | |
|---------------------------|---------------------------------------|
| Width, Edge and thickness | Accura 35-2D, 2000 Hz |
| Camber | PreciCura LR, 2000 Hz |
| Length | Doppler sensor, 0..... +/-2.500 m/min |
| Laser class | 3B (hot application) |
| Protection class | IP65, NEMA 4X |

We reserve the right to introduce modifications without prior notice



LIMAB were founded almost 30 years ago and have a long tradition of producing laser sensors and non contact measuring systems to meet the needs of the industry. Headquarters and manufacturing plant is located in Gothenburg, Sweden. LIMAB have regional offices in USA, UK, Germany and Finland and with distributors to cover other areas. Limab has over 15 years of experience in steel installations.



LIMAB North America Inc.

9301 Monroe Road, Suite B
Charlotte, NC 28270
USA
Tel: 001 (0) 704 321 0760
www.limab.com

LIMAB Oy

Henry Fordin Katu 5K
FIN 00150 HELSINKI
Finland
Tel: 00358 947 80 36 68
www.limab.fi

LIMAB GmbH

Mitterlangstr. 28
D-82178 Puchheim
Germany
Tel: 0049 (0) 89 84058320
www.limab.de

LIMAB UK Ltd

Unit 1J Chelston Business Park
Wellington
Somerset, TA21 9JQ UK
Tel: 0044 (0) 1823 668633
www.limab.co.uk



Exportgatan 38 B
SE-422 46 HISINGS BACKA, Sweden
Phone +46 (0)31 - 58 44 00
Fax +46 (0)31 - 58 33 88
sales@limab.se - www.limab.com