

PanelProfiler

Thickness Measurements in Industrial Processes



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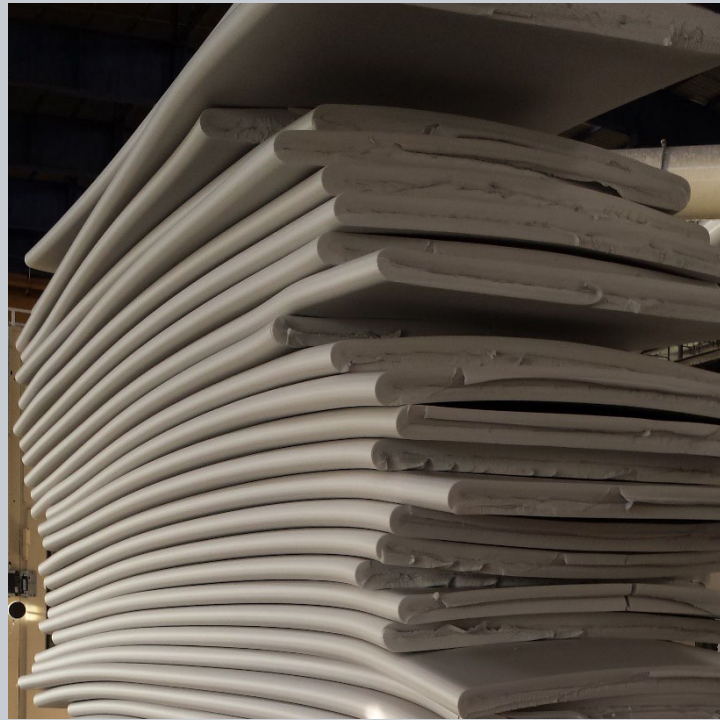
- Non-contact laser measurement system
- High accuracy thickness monitoring
- Process tool for increased yield, higher product quality and better production control
- For all types of material qualities

PanelProfiler

System for accurate thickness measurements of all types of materials

The PanelProfiler is an in-process non-contact thickness profile measurement system. Having good control of material thickness is essential during many different manufacturing processes. The PanelProfiler provides all the tools necessary to ensure that this can be achieved with minimum effort. The system will alert operators immediately if the process is starting to drift out of control, which will improve product quality and eliminate customer rejects. This powerful process monitoring system will also increase the production yield and save both material and energy.

The PanelProfiler uses the latest laser measurement technology using a non-contact method. Providing very fast sampling rate of 4.000 Hz and high resolution of 0.01mm (0.4 thou). This method is the only one for measuring on soft, humid and/or sticky materials, where older types of mechanical contact measuring systems doesn't work. Since it is non-contact technology, there is no risk for scratch marks or material compression. The laser sensors are installed in our unique and temperature stable mounting frame that requires a minimum of maintenance. Being non-contact there is no need for frequent calibration even on high speed and continuous lines.



Designed for harsh conditions

LIMAB has a long experience in supplying laser measuring systems in rough production environments to ensure low maintenance. The PanelProfiler is equipped with a high performance air cleaning system, ensuring that sensors are kept clean and cool in warm and humid applications. The measuring frame is supplied to meet customer requirements with perfect integration into any process line.

Designed for accuracy

To achieve a high accuracy thickness measurement, several factors need to be considered. LIMAB integrates their own and specially designed PreciCura laser sensors. Frames are built to minimize thermal distortion. By using differential thickness measurement and high speed synchronized sampling of the sensors, the PanelProfiler accuracy is unaffected by vibrating or jumping materials.

PanelProfiler – System versions for all applications

The PanelProfiler is available in many different versions.

- Multi-Track
User defined number of fixed measurement tracks (3-24)
Multiple measurement stations in one system
Automatically adjusts outer sensor pairs to edges of the material
Sensors constantly moving across the material giving a complete cross section profile
- Dual/Triple
System for measuring at a single position on the material
- Width adjustable
- Traversing
- Single track



Multi-Track system



Single-Track system



Traversing system

Thickness measurement applications

Thickness monitoring is in many industrial applications of highest importance. The PanelProfiler is capable of in-line measurements of material thickness in industrial processes such as:

- Mineral wool
- Fiber cement boards
- Rigid foams
- Composites
- Structural insulated panels
- Rubber
- Plastics
- Stone
-and more



User friendly Operator software

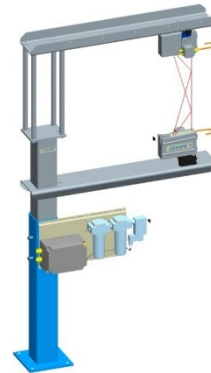
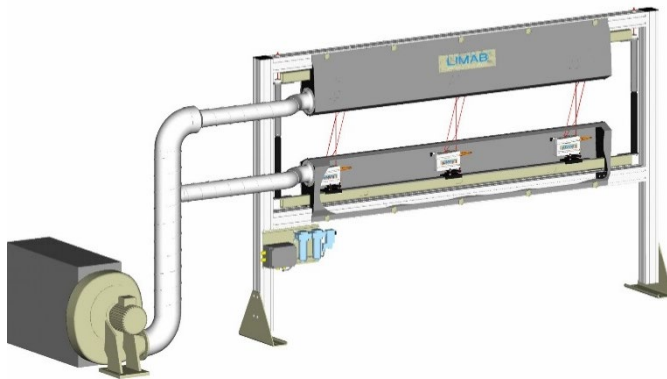
The Operator software is designed in an user friendly way and has many capabilities in order to monitor thickness profiles during the production process:

- Real time graphs and numerical displays
- Trend curves and history files
- Logging functions and report generation
- Alarms, warning and reject levels
- Remote diagnosis
- Calibration

PanelProfiler

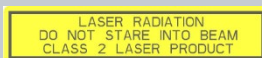
Technical Specification

Measurement range	0,1-200 mm (0,004-7,9"), other on request
Accuracy	From $\pm 0,03$ mm (± 1 thou), 2σ
Resolution	0,01 mm (0,4 thou)
Sampling rate	4.000 Hz
Operating temperature	0-40°C (32-104°F), other on request
Laser sensor, PreciCura SR:	Other sensors, PreciCura MR, on request
Size	165x112x44mm (6,28x4,25x1,65")
Laser class	Laser Class 2 according to EN 60825-1:2014 and 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007
Protection class	IP65, NEMA 4
Sensor mounting frame	
Versions	O-frame, C-frame. Fixed or movable sensor positions
Size	Customer specific
Software	Windows based
PC	Industrial PC



We reserve the right to introduce modifications without prior notice

LIMAB has since its foundation in 1979 been dedicated to in-line dimensional measurement in various types of industry. We have hundreds of installations in industries such as insulation materials, gypsum, wood based panels, steel mills and sawmills. Design, production and assembly of both laser sensors and complete systems are made in house, backed up by an international service and sales organization



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