

LaserSpeed Auto-tracker

Length measurement of blooms, billets, sections or slabs

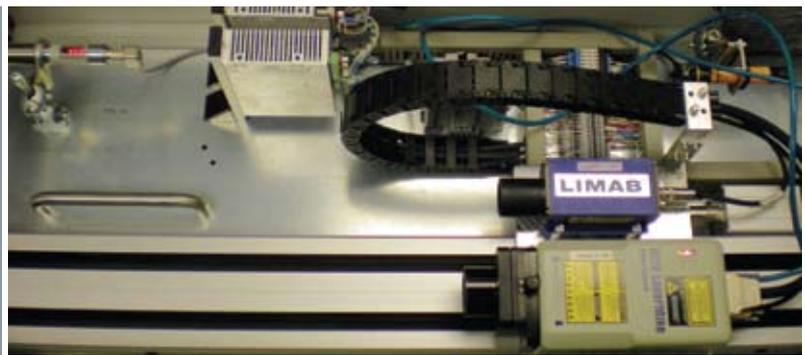


- *Non-contact length measurement*
- *High accuracy*
- *Low maintenance*
- *Suitable for hot or cold product*
- *Proven system*



Laser Doppler technology

LaserSpeed is the global leading Doppler gauge for length and speed measurement. It will achieve an accuracy of $<\pm 0.05\%$ and a repeatability of $\pm 0.02\%$ irrespective of the surface properties or bar temperature and without the need for calibration. The measurement is not effected by the scale on the product.

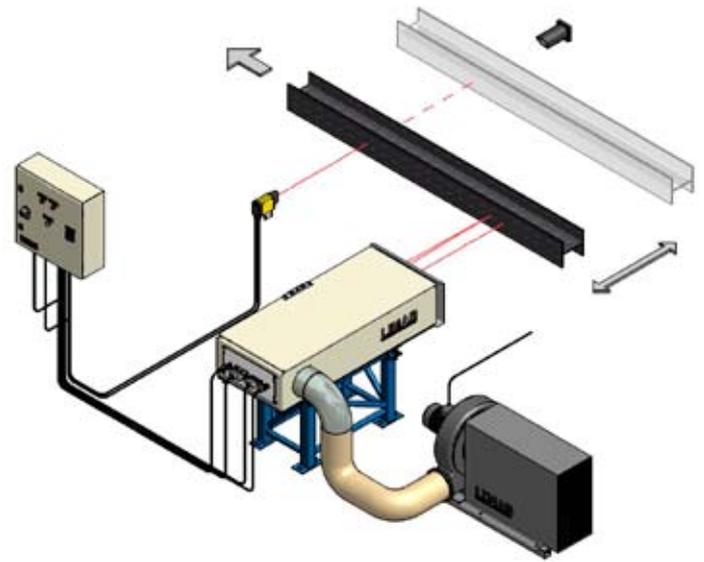


Servo tracking system

The LaserSpeed is kept at the optimum distance from the bar for perfect measurement. This is done by means servo positioning system with 800 mm of travel. The distance information is provided by an integrated laser sensor that measures the actual distance to the bar.

LaserSpeed auto-tracker

There is no doubt that the best method of measuring length in a caster or steel mill is by use of the LaserSpeed laser Doppler gauge. World-wide there are thousands of installations in steel mills where users are benefiting from accurate non-contact measurement in all types of processes. For correct operation the measured object must pass the laser at the reference distance +/- 100 mm and for some applications this is not possible. Typically this problem arises on slab casters where there is a large difference between the narrowest and widest slab or wide roller tables where bars are passing and are not in a fixed location but can wander to the left or right.



LIMAB technical solution

The auto-tracker provides a turn-key solution to solve this measurement application and is suitable for use on billet/bloom or slab casters or any roller table transporting hot or cold bars. The LaserSpeed is mounted on a servo driven positioning mechanism that automatically tracks the position of the bar keeping it at the optimum distance. The distance information is provided by an integrated laser sensor. A pyrometer will provide the actual bar temperature at the point of measurement enabling a hot to cold correction.

Forced air cooling

LIMAB have many years of experience in supplying laser measuring systems for use within steel plants. This knowledge is engineered into auto-tracker to ensure high accuracy and low maintenance. The system is kept clean and cool by high volume air blower and filter system.



Benefits

- Non contact speed and length measurement
- High accuracy and repeatability
- More reliable and consistent than existing contact wheel / encoders systems
- Measurement unaffected by material temperature or surface properties

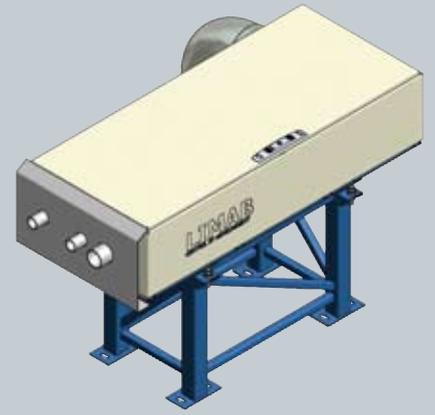
Side mounting advantage

Measuring hot slabs from the side is the most accurate method as the heat shimmer in the surrounding air is much reduced when compared with mounting above the slab. Furthermore the ambient temperature and heat transfer is much lower, this reduces the installation cost and makes the operation more reliable .

Auto-tracker length measurement

Applications

- Slab length control just prior to flame cutter on continuous caster
- Slab length measurement after flame cutter on continuous caster
- Section length control of sections at hot saws
- Run-out length of hot rolled sections
- Slab length measurement prior to re-heat furnace



Technical Specifications

LengthProfiler system

Servo travel	800 mm
Servo speed	256 mm/sec
Servo motor type	Stepper
Pyrometer	To suit application
Distance laser type	LIMAB XLR30
Distance laser resolution	1 mm
PLC type	Siemens
Cooling	Air blower & filter assembly
Cooling air volume	2000 m ³ /Hr
Electrical supply (cooling)	3 phase 380VAC, 16A, 1.5 Kw
Air flow sensor	Yes, 4-20 mA
Dimensions of box (typical)	1800L x 600W x 300H mm
Adjustable mounting stand	Provided to suit application

Doppler gauge

Speed range	0...± 12,000 m/min for 1m stand off
Accuracy	Better than ± 0.05%
Repeatability	± 0.02%
Stand off distance	1.0, 1.5, 2.0, 2.5 or 3.0m
Laser Class	3B
Protection class	IP67

Outputs

Quadrature pulse output 1	Programmable rate 250 KHz max
Quadrature pulse output 2	Programmable rate 5 MHz max
Serial RS232	Speed, length QF & status
Serial R422	Speed, length QF & status
Ethernet	Speed, length QF & status

We reserve the right to introduce modifications without prior notice

Complete measurement solution provider

Our core capability resides in our ability to deliver effective non-contact laser measuring systems for our customers. Through our experience and understanding of your needs we engineer and produce the right process measurement solutions that will improve your product quality and reduce your manufacturing costs.

LIMAB companies

LIMAB UK is part of the LIMAB group of companies founded 35 years ago who have a long tradition of developing laser sensors and complete non-contact measuring systems. The Headquarters and manufacturing plant is located in Gothenburg, Sweden. LIMAB has regional offices in the USA, UK, Germany and Finland with approved distributors and partners in other regions. LIMAB has over 30 years experience in producing measuring systems for the steel industry,



LIMAB, Gothenburg

Quality statement



In line with our policy of putting quality first LIMAB UK operates a quality management system which complies with ISO9001:2008. This is a visible demonstration of our commitment to supply the best quality products and a level of service that exceeds customer expectations. Certification number CA14016.



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