Segment roll gap sleds from Sequence Technologies quickly and accurately measure the distance between opposing rolls in thin slab continuous caster segments. The ST135 LineGAP is designed specifically for CSP casters; it provides real-time roll data to the repair technician using the gauge to evaluate segment roll gaps. Precise roll gap and alignment of continuous caster segments is critical because it directly impacts quality and production. Improperly gapped roll pairs can lead to quality issues, unscheduled machine downtime and loss of production. In recent years, the demand for thin slab segment roll measurement has increased and driven the advances in roll gap measurement technology.

The ST135 LineGAP is built to withstand the harsh steel mill environment. Its compact, thin design allows it to fit between roll pair gaps measuring between 50 and 65mm wide. The measurement sensors, linear variable differential transformers (LVDT’s), ensure accurate consistent readings. Each sensor is mounted within a spring loaded skid plate assembly that exerts a constant force on the roll pairs to simulate slab conditions. As the sled passes through the segment, the data is transmitted wirelessly to its host computer, where it is displayed on the screen so the operator can quickly evaluate roll conditions.

An industrial laptop provided with the system collects, analyzes and displays the data in numeric and graphic formats. As each roll pair is measured, color coded data is displayed to indicate the gap results compared to the “aim” gap reading. Upon completing a sled run, a segment worksheet report presents the data in a tabular format (Excel compatible) and a graph report displays gaps with respect to their acceptable limits.

**KEY FEATURES**

- Precise roll gap measurement of ±0.001” (±0.03mm)
- Quickly measure roll gaps on full length or split roll design
- Customized for CSP roll gap sizes
- Wireless data transfer to host laptop
- Real time data analysis with graphs and tables
- Trending and data logging for quality assurance
- Maintenance summary reports
- Simple calibration

**BENEFITS**

- Optimize production and machine yield
- Ensure optimum quality of cast product
- Reduce breakout potential

**Measurement Principle**

The ST135 uses linear variable differential transformers (LVDT’s) to accurately measure roll gap. The sensors are mounted within spring loaded skid plate assemblies that exert a constant force on the roll pairs to simulate slab conditions as the sled passes through the segment.

**Measurement Software Overview**

Numerical and graphical User interface displaying real-time roll gaps
Wireless data communication with PC
Summary reports in graph and table format can be exported to Excel
Adjustable roll gap tolerance limits
User defined segment parameters
Calibration software