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Primetals Technologies implements new measurement system to boost safety in long rolling mills

- **Non-contact safety technology Digital Optical Caliper used to measure long rolling product sections**
- **The system is designed specifically to remove the requirement of mill personnel approaching the rolling line during production, resulting in increased safety**
- **First unit successfully implemented in August 2023 at a steel producer in the U.S.A.**

Primetals Technologies has developed and implemented a ground-breaking portable safety technology known as the Digital Optical Caliper. This system eliminates the dangerous practice of manually determining the product section using wood or traditional calipers. The Digital Optical Caliper can precisely measure a variety of long rolling product sections, thereby identifying potential issues during production and promoting safer work practices.

Increased safety

The Digital Optical Caliper is a highly specialized, portable 'plug-and-play' gauge designed primarily for use in the roughing and intermediate areas of the mill and can be moved between different locations along the mill. The system is capable of measuring rounds, ovals, flats, and square sections with precision, eliminating the need for mill personnel to approach the rolling line during production. This innovative approach replaces the traditional methods of woodburning or physical calipering, which required operators to be near the rolling line during production to measure product sizes. This eliminates the necessity of operators spending time in hazardous environments to take product measurements, effectively reducing the risk of accidents.

Greater accuracy and productivity

The Digital Optical Caliper features two cameras, a tablet computer, and a portable supporting frame. The cameras mounted on the portable frame are used for measuring the height and width of the product providing real-time, accurate, and repeatable readings. The integrated computer processes the images from the camera using proprietary software that detects and defines the product dimensions. The dimensions of measurement are guaranteed to be within plus/minus 0.1 millimeters, although even greater accuracy was attained during production trials.

Designed for portability, the Digital Optical Caliper simply clicks into pre-installed mounting base plates and can be easily moved between multiple locations along the mill. This not only allows the operators to maintain a secure distance from the steel product during rolling, but also reduces the time required to prove setup and attain consistent rolling parameters.

Improved quality and yield

The unit is designed to achieve an IP65 protection rating, which is the second highest on the ingress protection scale, and can therefore operate efficiently in any mill environment. The measurement data collected during production enhances the troubleshooting process and aids in identifying issues such as roll wear and furnace soaking problems, including cold spots. Moreover, accurate section control improves quality and maximizes yield.



Digital Optical Caliper, a ground-breaking portable safety solution from Primetals Technologies.

This **press release** and a **press picture** are available at www.primetals.com/press/

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