

Improve your product quality

with **EPAC** patented roll monitoring system

US Patent No. 6.820,347 B2

*"In general, the steel industry has and continues to respond to the changing requirements of the product. Steel continues to be the material of choice since the steel industry is being proactive."
...General Motors Corporation's Dave Mattis, Director*

Keeping your mill in top condition will allow you to charge top dollar for your product and keep your customers happy. The mill that cannot deliver quality product will lose out to the mill that can. The result of producing a lower quality product is a lower sales price in a diminishing market without a reduction in production cost. It is a losing scenario.

In today's competitive environment where customers are raising their standards on product quality, and their expectations are at an all-time high, yesterday's roll dimensional accuracy monitoring methods are NOT going to suffice. ***Preventative roll dimensional accuracy monitoring is no longer optional.***

Gone are the days when a mill can save roll dimensional accuracy monitoring solely for use after a problem occurs to analyze what caused it. Roll dimensional accuracy monitoring needs to be done on a regular basis to ***prevent problems from occurring*** by catching small errors before they spin out of control.

We have all heard the definition of insanity: doing the same thing you always did and expecting a different result. In today's environment, rolling mills are willing to take ***extra steps in quality assurance*** if they lead to ***new levels of product quality.***

Today, progressive flat rolled product manufacturers are looking for reliable, cost effective, time efficient systems for ensuring and maintaining high quality performance in their mills.

The Epac Series 3000 Electronic Saddle Mic system emerged to fit these needs for ***today's high standards of roll dimensional accuracy.***

Reading roll profile, diameter, and temperature, the ***Epac Series 3000 saddle mic roll monitoring system*** is fast and easy to use. Its cost can easily be recovered in a matter of weeks or months. It is an inexpensive solution to the increasing demands of rolling mill customers for tighter product dimensional accuracy and consistency.

Because of its ***light weight and compact size***, the ***Epac*** can evaluate your systems on a regular basis as a ***preventative measure so you can keep your quality control systems much tighter and catch any irregularities faster. No other saddle mic can perform this procedure!***

The Epac Series 3000 saddle-type roll micrometer system brings roll monitoring to an entirely new level. Roll monitoring is no longer just roll profiling in the roll shop to ensure that reground rolls are within specification. With the advent of the Epac system, it is now a multi functional monitoring tool...start to finish.

The Epac system, which fully utilizes recent advances in technology and initiates its own patented advances in design engineering, is raising the bar on the quality expectations of all rolling mills. If you are not using it now, you will be in the near future when your customers demand it.

The design breakthrough of the Epac Series 3000 saddle mic roll dimensional inspection system has produced an instrument that is mechanically and technologically superior to the old caliper technology, providing dramatic benefits in size, weight, accuracy, and multitasking.

- ***Size.*** The smaller size gives the user the ability to physically fit the unit into places that would previously have been unavailable for roll inspection. This allows the instrument to be used for thermal profiling in tight places, troubleshooting in the mill, skating rolls without pulling them from a stack, as well as for the traditional profiling of rolls.

- **Weight.** *Epac* manufactures two models: The model 3038 which skates rolls from 14”- 38” **weighs 11 pounds.**

The model 3064 which skates rolls from 36”- 64” **weighs 14.5 pounds.**

- **Accuracy.** *Epac* offers calibration and certification to NIST-traceable standards to assist you in meeting and documenting the most rigorous standards in your product quality.
- **Multitasking.** The patent-pending *Epac Series 3000* not only reads diameter, but also temperature and profile...and gives you a colored printout of all three functions on the same page.
- All data gathered by the *Epac Series 3000* can also be transferred to the user’s Roll Management System.

Epac’s recommended inspection procedures for rolling mills

- **Product Quality.** Roll cooling and mill set-up can have a significant impact on product dimensional accuracy. Work roll stacks must be skated on a regular basis as soon as they are pulled from a stand. ***With an instant physical and thermal profile, operators can detect and correct anomalies in mill settings, roll cooling systems and other gauge and shape related systems.***
- **Roll Performance/Mill Productivity.** Many mills are now using HSS & high chrome work rolls for their surface retention and wear resistant characteristics, and want to use the rolls in multiple campaigns, without regrinding. With the patented *Epac technology*, ***roll stacks can be skated quickly and easily in front of the mill. Complete thermal profile, shape profile, and diameter readings will instantly appear on a tablet computer screen seconds after the skate to give the user a complete picture of the roll and mill conditions.***

- **Roll Grinding Accuracy.** Next, the roll must be skated prior to regrind. *Are there thermal peaks or hot spots that will affect the target profile when the roll temperature normalizes?*
- **Finished Roll Inspection.** When the regrind is completed and the verification skate is made, *are there thermal peaks or bubbles generated by “hogging” down to wear depth that will alter the specification profile when the roll temperature normalizes?*
- **Epac** recommends that every mill do a total mill analysis skate (To skate the top and bottom work roll from each of the stands as soon as they are pulled from the mill) at least once per month.

Everything needs to be audited: rolls, mills, operators, grinders. This record will show deviations from established standards. This procedure of continuous monitoring will assist you in gradually reducing deviations from standards to **bring your systems within your specs and keep them there.**

- To track deviations from standards so you can effectively reduce them, you have to know what occurred the previous week, month and year. **Epac units will accurately acquire and retain the information you need quickly and easily.**

*This audit procedure needs to be done more frequently if the mill is having problems and until successful corrective action is verified. Less frequent audits can be scheduled if monitored areas are consistent for 6 months and variations are at acceptable levels (they are within established specifications).

Continuous improvement is the objective in all areas of customer quality expectations. The **Epac Series 3000 system** with its profiling and diagnostic capabilities is a low cost, effective instrument that is necessary to the future of your shop, your mill and your job.