

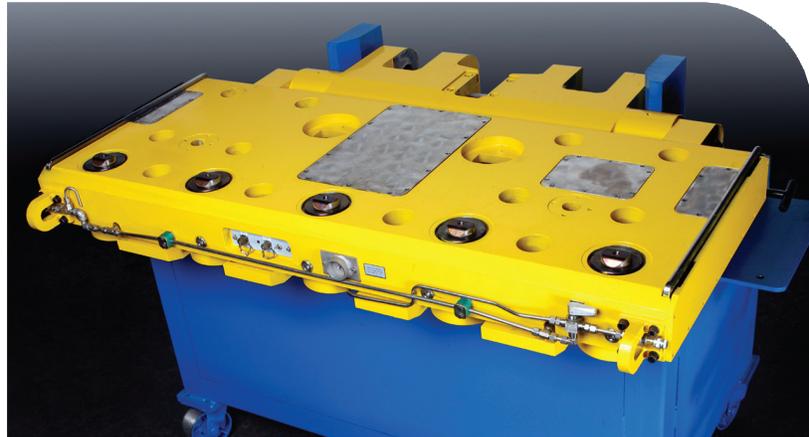
## **RUGGED ROLL GAP SLEDS** Provide Data for Accurate Caster Alignment

Precision alignment of continuous caster rolls is critical for optimum caster performance. Improperly gapped roll pairs, bent rolls or misaligned segments can lead to severe quality problems or caster failure. Roll Gap Sled Systems from SMS Technical Services, an SMS group company, can accurately and quickly measure the roll gaps and the angle of the rolls and determine the condition of a slab caster. The result: steel producers who use our Roll Gap Sleds have precisely aligned casters that produce superior products and do not experience downtime from caster misalignments.

Faster and more accurate than manual roll gap measurement, our sleds provide the roll data in real-time, in the caster. And because of their unique design and superior construction, they are also more rugged, accurate, dependable and easy-to-use than other sleds on the market.

### **Rugged body**

Designed to specifically match a caster's parameters, Roll Gap Sleds from SMS Technical Services have a rugged one-piece body made from 4140 steel that is less likely to get bent or distorted when run through a drive or broken roll. Because our sleds have an extremely strong and rigid platform, they deliver repeat-



Sled hardware includes an Intel Processor, a PC104 interface, 16-bit analog-to-digital cards, 512Mb memory and nonvolatile memory

able gap readings and have a long life.

### **Better sensors for better roll data**

Made from hardened 17-4 PH stainless steel to insure long service life, our unique floating-gap, flat-top sensors provide accurate readings run after run. The sensors are also sealed from dust and water, so our sleds can be run with water systems operating to better simulate actual caster operation. They also use dependable DC linear variable differential transformers (LVDTs) to insure consistently repeatable results. Plus the entire sensor assembly can be disassembled for easy repair.

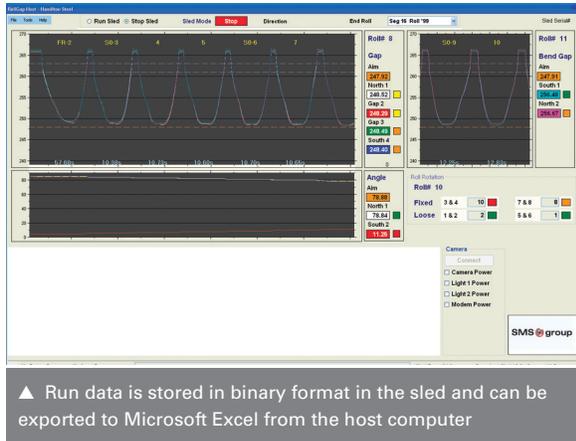
Because our gap and roll bending sensors use a flat-top design, they contact the roll tangent longer, get

more samples and more accurate gap measurements.

In addition to measuring every roll pair, sensors mounted on the pass-line sides of the sled measure angles to ensure a smooth transition from roll to roll and segment to segment.

### **Loading runners ensure accurate roll-bearing data**

Our Roll Gap Sleds have unique loading runners that apply the same force to the rolls that a slab would exert. Because slab forces are simulated, sensors can detect worn roll bearings and provide accurate readings of actual slab conditions. The loading runners also ensure that the sled is properly positioned against the outer radius rolls for accurate pass-line measurements.



## Hardware and modem

Our Roll Gap Sled's hardware-software system is designed to be cost-effective, easy-to-use and -upgrade and to run on hardware today and beyond. In fact, we guarantee software compatibility for three years.

Our Roll Gap Sleds use off-the-shelf, easy-to-replace Microsoft Windows-based non-proprietary hardware in the sled processor. They also use a 2,4 GHz spread spectrum modem to acquire real-time data from the sled that does not require an FCC license and is easily connected to the host computer. Plus, run information is stored in nonvolatile memory so data can't be lost if power is lost.

## Fast and flexible software

The sled and host-computer software runs on Windows operating systems for ease of data handling and operating system compatibility.

With its Microsoft Windows XPe operating system, the sled can go from power-up to starting a run in less than two minutes. The sled software can also be customized to keep file sizes small.

A host computer with the sled control software pre-installed is supplied with the sled. This software controls the operation of the sled; displays sled data in real-time; has built-in reports; and is pre configured with caster parameters, which can be edited.

## SMS TECHNICAL SERVICES

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## Data and reports

Communication and a data stream begins when the sled begins its run and can be exported into Microsoft Excel reports at the end of the run to analyze it or combined to analyze trends.

Caster information, for example segment number and tons cast, can also be imported into the reports.

## Fast and easy calibration

Our Roll Gap Sled System can be quickly and easily calibrated by one person. Sleds come with all of the specialized calibration equipment: a calibration laptop; a c-frame for calibrating the roll gap and roll bending sensors; an angle fixture to calibrate the pass-line sensors; and easy-to-understand instructions.

## Training and support

We take pride in our outstanding customer support. Our experienced technicians make sure your technicians can optimize the data collected by our roll gap sleds. In addition to the initial training and complete documentation, we also provide ongoing training and support. We also provide parts, upgrades and fast repair services to keep your sled operating perfectly.

## Options

Each sled is custom configured with two to seven sensors, depending on caster needs. Roll-bending and roll-rotation sensors and video inspection equipment are also available.

## Superior caster performance for you

A Roll Gap Sled System from SMS Technical Services can help you optimize your continuous caster. Casters which have been precisely aligned using our Roll Gap Sleds operate better, longer and provide consistently better quality product.

To learn more about how SMS Technical Services's Roll Gap Sled System can help you get top performance from your caster, call us at +1-724-553-3420.

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