

Industry: Pipe

Application: Cut Control

## Controlling Quality for Steel Pipe Applications

### Profile:

Steel pipe manufacturer

### Solution:

LaserSpeed® Pro 8500/9500

### Results:

- ▶ Complete seamless pipe profile for total quality control
- ▶ Better mill and reduction control
- ▶ Shear/saw control on a welded pipe mill eliminates the slippage and mechanical problems associated with tachometer and roller measurement devices
- ▶ Gauge never has to be recalibrated once the gauge is setup properly
- ▶ Cut length will be correct from the first pipe to the last pipe



Controlling quality for pipe applications is no easy task. This application note describes how you can complete this task with ease using the LaserSpeed Pro gauge.

## The Challenges:

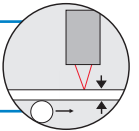
## Accurate Pipe Measurements

In order for manufacturers to control the quality of their pipe applications, most need to accurately measure the speed between each mill stand and the position of their wall thickness measurements.

Additionally, manufacturers need to control the shear on a welded steel pipe mill. Historically, manufacturers have used contact measurement techniques for their pipe applications that produce inaccurate measurements and reduce production quality.

## The Solution:

## LaserSpeed® Pro 8500/9500



The LaserSpeed Pro gauge is ideally suited for all pipe applications. Using Nordson's small, lightweight gauge, manufacturers can obtain a complete pipe profile for total quality control. The LaserSpeed Pro gauge works in conjunction with a wall thickness gauge on seamless pipes. The wall thickness gauge measures the pipe's wall thickness along the length of the pipe, and the LaserSpeed Pro gauge provides the position of the wall thickness measurement. Combining the two will provide a complete profile of the seamless pipe.

The LaserSpeed Pro gauge can also be used on reduction mills to provide the speed measurements between each mill stand. This allows better control of the mill and better reduction control.

In addition, the LaserSpeed Pro gauge can be used to control the shear on a welded pipe mill, which eliminates the slippage and mechanical problems associated with tachometer and roller measurement devices.

The solution provides extremely tight length tolerances. See Table 1 on next page.



## The Solution:

LaserSpeed® Pro 8500/9500

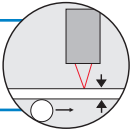


Table 1 shows measurement results using a LaserSpeed Pro gauge to control the shear on a seamless pipe line. The first column in Table 1 show the pipe length measured by hand. The second column shows the length measured by the LaserSpeed Pro gauge. Column A shows the difference between the hand measurement and the LaserSpeed Pro measurement. Column B shows the percentage difference between the hand measurement and the LaserSpeed Pro measurement. As seen in the table, the LaserSpeed Pro gauge did an excellent job of controlling the cutter to obtain accurate pipe lengths.

Hand Measured Length	Laser Measured Length	A	B
115.4922	115.4894	0.0028	0.002%
113.6295	113.6164	0.0131	0.012%
114.787	114.7658	0.0212	0.018%
115.2791	115.2708	0.0083	0.007%
115.6015	115.593	0.0085	0.007%
115.0416	115.0334	0.0082	0.007%
114.4515	114.4286	0.0229	0.020%
114.821	114.8035	0.0175	0.015%
115.1302	115.1144	0.0158	0.014%
115.8786	115.8549	0.0237	0.020%
114.7456	114.7338	0.0118	0.010%
114.3308	114.3212	0.0096	0.008%
115.9465	115.9359	0.0106	0.009%
114.706	114.6867	0.0193	0.017%
115.0133	114.9957	0.0176	0.015%
114.7493	114.7376	0.0117	0.010%
114.3478	114.3343	0.0135	0.012%
115.9522	115.9265	0.0257	0.022%
114.7852	114.7621	0.0231	0.020%
114.7154	114.698	0.0174	0.015%
115.1302	115.105	0.0252	0.022%
115.1339	115.1031	0.0308	0.027%
114.7418	114.73	0.0118	0.010%
115.3998	115.512	-0.1122	-0.097%
114.6947	114.5341	0.1606	0.140%
114.7267	114.7074	0.0193	0.017%
115.9767	115.9717	0.005	0.004%
114.7324	114.7187	0.0137	0.012%
115.1603	115.1182	0.0421	0.037%
114.7701	114.7451	0.025	0.022%
114.7248	114.7018	0.023	0.020%
115.3847	115.3669	0.0178	0.015%
114.804	114.7753	0.0287	0.025%
114.7625	114.7451	0.0174	0.015%
114.7267	114.6961	0.0306	0.027%
115.8202	115.7852	0.035	0.030%
114.7625	114.7376	0.0249	0.022%
114.7663	114.7413	0.025	0.022%
114.7437	114.7112	0.0325	0.028%
115.5563	115.5214	0.0349	0.030%
115.0171	114.9995	0.0176	0.015%

**Table 1 - Controlling Shear with LaserSpeed Gauge**

## The Results:

The LaserSpeed Pro gauge delivers the following benefits:

- ▶ Complete seamless pipe profile for total quality control
- ▶ Better mill and reduction control
- ▶ Shear control on a welded pipe mill eliminates the slippage and mechanical problems associated with tachometer and roller measurement devices
- ▶ Gauge never has to be recalibrated once the gauge is setup properly
- ▶ Cut length will be correct from the first pipe to the last pipe

The LaserSpeed Pro non-contact gauge is the most accurate, reliable, and cost-effective solution for pipe measurement applications and ensuring product quality.

For questions or support go to: <https://ndc.custhelp.com/>

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