Can-Technologies Inc.
An Engineering Company

CASE STUDY - Cut to Length - Billet Casting

The Background

A large steel facility in Ontario was struggling with maintaning consistent, high product yields and productivity as a result of inaccurate and reliable billet lengths and was coupled with the resultant increasd wear and maintenance frequency on cold shear and downtime at the rolling mill. Energy costs were also a factor as the system and process were inefficient.

Direct weighing was the measurement method in place, however, as the measurement style was contact type, it required frequent maintenance and adjustment to keep to specification. Control reverted to Encoders however they typically provided inaccurate readings due to roller slippage and temperature variations etc.

The Solution

The traditional methods of measurement were considered but it was proposed to implement a non-contact laser measurement as the means of measuring the billet length. This technology has proved to be as a precise and accurate method of determining length measurement and was able to be installed without the need to disturb existing infrastructure. The devices were non-contact devices so they were not subject to errors through slippage and required no ongoing calibration or very little maintenance. In addition, they also proved to be robust and powerful enough to be be subjected to both the harsh conditions and noise sources such as steam etc.

The Results and Benefits

The billet length measurement proved to be precise, accurate and the previous deviation of 6” was reduced to 0.25” which is a virtual elimination of deviation. In this case 3 inches of billet is saved on average. On a 200” billet this represents a 1.5% increase in yield.

The decrease in wear on the cold shear was substantial, however other costs related to maintenance of measurement and processing equipment were reduced in both in the melt shop the rolling mill. In addition, with the increased productivity the cost of energy was also reduced as a function of consumption/ton of product produced (cost of conversion).

In the case of this particular customer with just the simple factor of the increase in yield the ROI was a staggering 3 weeks.

This case study forms part of a vast range of technical knowledge and professional services available to you as related to the steel industry. For more information on this or other applications please contact us at the address below:

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