

Machining

Reducing Operator Error in Your Machine Shop

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A top goal of every operations manager is to reduce error on the shop floor, whether it be mechanical error or human error. While 0% error rates are pretty hard to achieve, the reality is that even a small percentage of error can quickly add up.

An article from *Competitive Production* puts this into perspective:

“If things are done correctly 99 percent of the time, that equates to two unsafe landings at Chicago’s O’Hare International Airport each day; 16,000 pieces of lost mail each hour; 20,000 incorrect drug prescriptions each year; or 500 incorrect surgical procedures completed each week. In manufacturing, the slightest of errors, for example one-tenth of a percent, can have a significant impact on a company’s financial performance and profitability.”

When it comes to band sawing, error remains a top concern for managers. As Matthew Lacroix of LENOX explains *here*, fabricators and other metal-cutting shops have three main areas of concern regarding their band saw processes. “The top frustrations that we repeatedly hear from fabricators are machine downtime, blade failure, and operator error,” he tells *Canadian Metalworking*. “In each case, there are steps they can take within their own organizations to manage the problems.”

The white paper, *Accounting for Operator Inefficiencies in the Metals 2.0 Environment*, provides a few steps managers can take to reduce error in their band saw department:

- **Optimize workflow.** Reducing error and increasing productivity often go hand-in-hand, and taking steps to optimize workflow often accomplishes both. This typically includes analyzing equipment placement, material flow, and ergonomics. Even something as simple as adjusting the height of staging tables can make a difference. By reducing the amount of times an operator handles the material, managers can improve operator efficiency, reduce the chance for error, and improve safety.
- **Implement accountability procedures.** Without a paper trail, there is no way to account for errors when they happen. One-over-one verification procedures can be used to ensure that operators are following the correct procedures and running saws at the proper settings. Band saw operators, for example, could be required to sign-off on paperwork once they have set up equipment and performed the initial cuts. Another operator or supervisor can then sign off to verify that proper procedures have been followed.
- **Make operator training an ongoing procedure.** Most shops have multiple shifts, which means that inexperienced night-shift operators may be running the same machinery as seasoned day-shift operators. This often causes inconsistencies in quality and productivity. By instituting regular operator training, managers can level the shop floor talent and add consistency to production procedures. Managers can discuss topics such as proper blade selection and use, scrap rates, and material requirements.

What other strategies has your machine shop implemented to reduce error?