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SAFETY MATTERS

Helping employees stay cool while working in a hot environment doesn't take much, in terms of cost or effort, but the payoff is huge in the areas of elevated productivity and morale.

This was a hot and dry fall in most areas of our country. As I wrote this column, the heat index here was 114 degrees F. This kind of heat brings up a safety issue that we do not face the majority of the year. This issue is heat stress. The vast majority of gear shops in this country are not temperature controlled, and we must be concerned with the well being of our employees when it's hot outside. We must provide adequate cooling periods either in our air-conditioned sections, or with fans and breaks so that employees don't get overheated. It's also a good idea to provide cold drinks, either a nutrition type of drink or just water, and have them available to all of our employees as needed. These few, simple, inexpensive things will really improve morale, which in turn improves productivity.

We all have occasion in our industry to use band saws as a means of preparing material for gear cutting, and there is an excellent article in *Machining* magazine's July/August issue on safety issues in band sawing. It is a down to earth, informative article, and I would recommend it to all of you.

Good news often comes in groups, and I am happy to report that the new updated version of ANSI B11.19 Standard Performance Criteria for Safeguarding has been approved by the American National Standards Institute. This standard is intended to complement all the B11 standards that are written for specific machine tools. It had not been updated since 1990 and now uses updated information and technology to help us safeguard our employees. This is a standard that ought

to be in every company's possession and referred to frequently.

A subject we have not paid much attention to yet is hob sharpening. Many of us in the industry do our own hob sharpening. Of course, there also are many of us that "farm out" this process. We must realize, however, that a newly sharpened hob is a hazard to the operator or setup person. The hob is sharp! This is a seemingly dumb statement... of course it's sharp. That's why we had it sharpened. But the operators and setup people are sometimes a little blasé concerning sharp hobs. They are used to handling them, and half the time that they are handling them they're not particularly sharp, so it becomes easy to get complacent when handling any hobs. Most of the cuts I see attributed to hobs occur when the employee is either installing the hob on the arbor, or

removing the hob from the arbor. There are occasions that the hob is quite tight on the arbor, and the area is usually wet with coolant and covered with chips. It only takes one slip of the hand to get a pretty nasty cut. When changing hobs, I feel that it is the proper time for the employee to use good heavy gloves. This is the only time gloves should be used, as the machine is turned off with no axis motion to trap a hand. One thing I have noticed over the years is that the key for the hob often gets damaged through chips, loading and unloading the hob, and just the general abuse from use. This typically makes the hob more difficult to load and unload on the arbor and makes getting cut more likely. This is another cheap

fix, and it should be addressed as soon as key damage occurs.

Due to the time constraints involved with publishing a magazine such as this, I have not yet been able to write

about the new equipment and ideas presented at Gear Expo 2003. I plan to report on all the significant safety issues that were addressed at Gear Expo in the next issue of *Gear Solutions*. ☐

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ABOUT THE AUTHOR:

With more than 30 years of experience in the gear industry, Terry McDonald is a manager with Repair Parts, Inc., a partner with Re-New Machine & Maintenance, Inc., and a current member and past-chairman of the American National Standards Institute B11.11 Subcommittee on Safety Requirements for Construction, Care, and Use of Gear Cutting Equipment. McDonald writes this monthly column specifically for *Gear Solutions* magazine. He can be contacted through the magazine at editor@gearsolutionsonline.com. Responses and reactions to his column are also welcome.