



TECH TIPS

Question: We cut all structural steel. The problem is coolant running down the steel onto the floor. This becomes a mess and a safety hazard. Is there anything I can do to eliminate this problem?

Answer: Yes there is a solution to your problem. We offer products called the Micronizer™ and Micronizer, Jr. spray lubricant systems. The difference between the two is the Micronizer, Jr. is used for blade widths less than 1" and the Micronizer for all other widths. Lenox Lube® is the lubricant that is used in the system. It is applied to the blade and aids in tooth penetration and reduces frictional heat. The other lubricant we offer is called Lenox Lube - C/Al™. This product is used when cutting non-ferrous metals especially aluminum and copper alloys. Either one of these products will eliminate your problem and keep your production going.

Question: I'm a band saw operator in a fabrication shop. We cut a lot of angle, tubing, and I-beams. Can you please give me any tips on cutting these types of materials? We also cut some bundles from time to time.

Answer: Besides the tips listed below, you should perform regular maintenance on your machine. The guides, blade tracking, fluid levels, belts and coolant ratio should be checked on a weekly basis. All the cutting tips will not matter if your machine is in poor working order. Some band saw blade manufacturers will perform this maintenance on your machine for you. Here are some cutting tips:

- Common band speed for mild structural steel is 250 F.P.M.
- Keep the weld bead of the structural part at the exit of the cut.
- When bundle cutting, be sure to prevent any movement of the material. Use a top clamp, strapping, or even tack weld the material.

- Use Extra Heavy Set blades for cutting large beams or where any blade pinching may occur.
- Select the correct tooth pitch for the thickness of the material you are cutting (refer to blade manufacturers' tooth selection charts).

Question: I've been using the same Lenox band saw blade product (1" x 0.035" x 8/12 TPI) to cut for years and have never had a problem with the blade. All of a sudden, I'm stripping teeth. I cut mostly mild carbon steel tubing, channel, and angle with a 0.125" wall, but recently I've started to cut 1/2" x 3" flat bar. Why am I stripping teeth?

Answer: The first thing you want to look at in this situation is if you are using the proper number of teeth per inch (TPI). **Always remember that the maximum material cross section determines the correct TPI.** In the above question, the application was mild steel tubing, channel, and angle with an 8/12 TPI blade. The 8/12 TPI blade is the proper TPI for **structural** material with a wall thickness of 0.100" to 0.150". It is also the proper TPI for **solid** material up to 1/2" maximum cross section. When the operator started to cut the flat bar across the 3" cross section, the gullets were getting packed with chips long before they exited the cut. This caused tremendous stress on the teeth, fatiguing them and causing the stripping problem. The correct TPI for the flat bar would have been 3/4 TPI. An alternative solution would be to turn the flat bar on its edge and cut across the 1/2" cross section using the 8/12 TPI blade, which would be the correct TPI for the application. ❖

If you have a sawing question that needs a solution, please tell us about it. We'll be happy to help you!
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