

We recently had a guillotine cutter operator smash a finger in the clamp while preparing for a cut. It's still a mystery as to exactly how it happened. It resulted in a visit from OSHA, and they are recommending that we add additional safety features to prevent a repeat occurrence.

We have talked to our maintenance/service provider and they are unaware of any additional protection that is available. We have two cutters and the clamp pressure specs out OK on both machines. The operator has over 25 years' experience and we are scratching our heads on how to resolve this.

Does anyone have any suggestions or aware of any additional safeguards?

OSHA is suggesting modifying the light curtain so it prevents activation of the clamp as well as the knife, but that would make cutting some materials very difficult.

A second suggestion is to install a wrist restraint that, when worn prevents the operator from accessing the pinch point. This seems to be a ridiculous suggestion as it would prevent access to the pinch point but limit mobility in removing product from the bed of the cutter.

Any suggestions would be greatly appreciated.

I don't have any thoughts, but we work with a loss control safety specialist throughout property and liability broker and/or workers compensation carrier. They may want to reach out to their contacts to see if they have any suggestions they can offer.

You mention that OSHA is 'Recommending' additional safety features, not 'Requiring' safety features.

That is a big difference.

Modifying a cutter would open a can of worms in my opinion and make the cutter do what it isn't designed to do.

We have polar cutters. You can hurt your finger when you put the clamp down (ie lose a finger nail), but not smash the finger. Full pressure happens when the blade goes down and both hands are on the cutting buttons. I'm not sure how you can make a cutter completely safe without making it inoperable.

Perhaps the manufacturer can help?

First, we experienced the same incident a long time ago and the investigation showed that the operator was "distracted" during operation by another employee. Since then we have had a sign at all machines indicating, "NO Talking" to the operators while they are on the machine. We made it the operators responsibility to remove himself from the equipment if someone is distracting them. That includes managers and owners. It is a constant problem.

So there is a "Valve" that controls the speed at which the clamp comes down when the operator steps on the clamp pedal. When the pedal is depressed to hold material in place this is usually not "high" pressure but just enough to hold the materials in place. The high pressure is usually activated during the actual cutting process. Even so the speed at which the clamp comes down can cause harm and not allow enough time for the operator to react to the mistake

That being said there is usually an adjustment to control the speed at which the clamp comes down. If pedal clamp speed is high then the operator may pinch the thumb on top of the stack if it come down very fast.

Slow down the pedal clamp speed, slow it way down.

I am unaware of any additional safeties to prevent this and stand by the operator being distracted by another employee.

An easier approach is by having a block in place at all times (that can change in height) which allows the material to be pressed and held but does not allow clamp to hit bed. Of course would not work for a couple of sheets but would be good for any stack taller than a finger height.

Not sure if this is an "answer" but I have had cutters prefer to run the magnetic pads under the clamp, and a low pressure. The pad does provide an extra instant of response time when dealing with difficult to pile stocks, and manually lowering the clamp, and the precautions that must be taken when doing so.

Sorry I cannot be of help. I am curious to see what others have to say. (Polar claims that you can put an egg under the clamp and it will not crush it, we have never tried this)

Osha can be overpowering at times and very inhibiting to production.

Place a huge sign near the cutter and a picture of the injury showing what can happen if not careful.

We have 3 Polar Cutters in our Plant and the Clamp pressure is very light to prevent a smashed finger.

The clamp at this point will not even make a mark on a piece of corrugated cardboard. When they were installed the Installer would even put his fist under the clamp to demonstrate The safety of the clamp.

However when the cut buttons are engaged, that's when full pressure is added to the clamp.

I was wondering if the cutter was an auto cut and the Guy put his finger under the clamp During the auto cut cycle.

It is very difficult to cut some material without holding it against the back gauge with your thumb. I have cut for many years and have taught My Guys to use their Thumb not their fingers. You may pinch you thumb from time to time but it keeps your fingers safe.

Operators should never place their fingers under the clamp.

Seems like something out of the ordinary happened.

We use jogging blocks most of the time.

What type of a Cutter was used when this happened?

(Editor's note: the question asker the cutter is a Polar 90 EL - Used primarily as a backup)

Safety Team,

When setting the load in the cutter, the operator needs to hold the load in place to ensure the material is not shifting as the clamp comes down. This can be done using a wood block except for smaller pieces or when cutting items that are spread out on both side of the cutter.

Normally, the manual foot clamp will hold these materials without full pressure and the full pressure is not being applied to the clamp until both hands are placed on the buttons to cut. It the foot clamp initiates full clamp pressure then something may be wrong with the cutter.

I would question the circumstances of this incident and look at the actual injury to determine if it was caused by a clamp smash or something else. The cutter should also be looked at by a professional to determine if the clamp pressure does clamp at full pressure with the foot pedal.

Keep in mind, we need to work with OSHA to educate them on our processes, they have been wrong in previous assessments. For example, if we follow the letter of the OSHA law... when hanging a plate on press we would need to open the guard, kill the power, insert the plate into the clamp, turn the power back on, etc., of course this will not work.

This could turn into a huge issue with all printers if OSHA is not dealt with in a timely manner; they will target all printers for inspection.

This cutter is likely from the 70's and is no longer supported. I'm not sure what safety features were in place on this model. It should be replaced.

First the company management has to understand just what steps caused the smashed finger. This is very difficult because the injured person may not really know what he did that one time or not want to say what he actually did. Management has to reconstruct the incident to know what exactly happened .

Second the safety suggestions given are grasping and not able to correct a defect that management does not understand.

Third --I would suggest to call Gene Mount of Cutter Service to work with management & the injured person to definitely determine the cause sequence of operator actions.

Comments ---Notice I did not say ERROR OR SHORT CUT . In all my 50 years of printing ownership with our family management I learned of a new procedure 6 months ago that caused a slight pinch of a finger and could have been bad if the paper push out was larger. The clamp speed coming down when testing for a setup cut many times is way too fast, we reduced this speed on ours a lot many years ago. Our cutter is a 1966 Saber 4 Harris 65 inch with Microcut and air bed . We have to watch the dual safety carefully for correct operation and to be sure paper shims are not used around micro switches and bar paddles .

In other fine shops I have seen matches jamming buttons , taped over micros, sticky bent up top cutting bars that activate micros. I have recently seen cutting on the off side when a blade chip is present and the operator reaches in for the push out after the cut , beats the push out with his right hand as cut is completed he lets go and gets fingers jammed in the gap for clamp/blade. Check under machine for dirty greasy controls that again cause late motions or incomplete mate-up of contacts. Oil hydraulic oil or improper oils , seals worn out and leaking. Stripped out blade bolt holes cause flexing of blades and chips down the line .

Our 4 1935-8 Seybold Precision cutters in Chicago were bought new & in service until 2010 had safety handles that were able to be blocked up with a wood wedge or the handle position could be altered with a set screw adjustment that made it look like the safety was being lifted when the BOSS was around and not used when operator was cutting . Even the safety could be lifted by hip/ knee action allowing reach in during the cut. This allowed operator to beat the timing have a hand free above the table. Naturally the best solution for vendor , OSHA and insurance company is to buy a new machine.

The down side is if the injury occurs a second time on this machine then the management will be found to be indeferent, careless , cheap and guilty of whatever can be assessed by OSHA.

If the member would like to talk about what OSHA requires and its options in responding to OSHA's suggestions, I would be happy to talk with them.

Daniel R. Flynn
Partner

Dinsmore & Shohl LLP • Legal Counsel
Chicago, IL
(312) 837-4305
daniel.flynn@dinsmore.com
