

TerranearPMC Safety Share

Week of July 20, 2015 – Pinch Points

We, in the safety and health profession have had a considerable concern of pinch points for decades. According to the Oxford dictionary, a pinch point is “A place or point where congestion occurs or is likely to occur, especially on a road.” As you may guess, this is not what “pinch point” means within the field of occupational safety (although both can be just as irritating). Pinch points are physical conditions where there is a likelihood of getting a part of your body (or clothing) stuck between two pieces of equipment or items. A common illustration is a moving part, such as a machine, that is designed to contact a stationary part. Punch presses are a classic example, where a person places an article (piece of metal or other material that needs to be shaped in a specific manner) into position while a press contacts the article with tremendous force and either shapes the article or imbeds a mark. Prior to the advent of engineering controls (i.e. machine guards), there were many persons that suffered severe injuries due to a mishap of not getting a hand or arm out-of-the way. Unfortunately, many times people decide to circumvent the guard system so they can be more productive – and many times the result is unforgiving.

A pinch-point can be thought of as a smaller version of a “caught-between” where the latter typically involves the whole body getting caught. This is a typical hazard in the construction industry where individuals work too close to heavy equipment. Meanwhile, a pinch-point is generally thought of as involving an appendage such as a finger or arm.

At work, pinch points are a regular part of performing work. Hand tools, and bin covers put our hands, head and sometimes our entire body in danger. An injury can come from something as small as a pair of pliers, or as large as an excavator. Most tools can cause pinch points. It might be surprising to know that hand injuries alone account for one third of the millions of disabling on-the-job accidents each year. As a matter of fact, most of hand injuries are caused by pinch points – 80% of them. Each year, workers suffer approximately 125,000 caught or crushed injuries that occur when body parts get caught between two objects or entangled with machinery. The physical forces applied to a body part caught in a pinch point can vary and cause injuries ranging from bruises, cuts, amputated body parts, and even death.

So how do we protect ourselves and our fellow workers from pinch points? There are three major things we can do – they are *awareness*, *physical barriers*, and *personal protective equipment*.

Awareness: Many pinch points cannot be removed, but if you are constantly alert you can protect yourself from injuries. Awareness comes in two forms, a common sense alertness of the right thing to do, and training in the correct way to do things and use equipment. Many of our job hazard analyses or health and safety plans identify specific activities where pinch-points are prevalent. While specific controls can be instituted, maintaining a high awareness level is an excellent way toward accident prevention (of course, when feasible, engineering controls should be considered).

Physical barriers: Physical barriers might be anything from a machine guard on a table saw to barricades or warning devices. Physical barriers are there to protect you from injury, by physically controlling your position. Guards are important to protect you from direct contact with moving



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parts, flying chips, kickbacks, and splashing of metal or harmful liquids. Barricades are placed at construction sites to warn you of dangerous situations. Barricades can be simple danger or caution tape or even heavy immobile units, such as jersey barriers. Such controls should never be removed unless you know why they are there, and the reason for being there is completed. Always check with your supervisor before removing barriers.

Personal Protective Equipment (PPE): Respecting and using physical barriers and being aware of your surroundings doesn't cover everything. Make sure you are always wearing your safety gear and inspect it before each use. Although the last line of defense against a pinch point injury, PPE (proper gloves, footwear) is a necessity to ensure your position and your extremities are protected. Many manufacturers now design gloves to protect workers from pinch points, offering extra padding while maintaining dexterity. While gloves (and other PPE) will not prevent an occurrence from happening, such items can mitigate or reduce the severity, from say, a broken bone of fractured finger to needing only first aid.

It is very important to make sure your pants and sleeves are not too long or too loose. Shirts should be fitted or tucked in. Do not wear any kind of jewelry. Tie back long hair and tuck braids and ponytails behind you or into your clothing. Wear the appropriate, well-fitting gloves for your job.

Before you start work activities, take a little time to identify workplace hazards. Make sure your S&H programs detail the necessary steps to work safely. Give your work your full attention and do not answer your cell phone while performing a work task. Horseplay, daydreaming or trying to multi-task are accident precursors as too many accidents occur when workers are distracted.

THINK before you put your hands in a tight, restricted location. Machinery can pose a hazard with moving parts, conveyors, rollers and rotating shafts. Properly maintain and always use the machine and tool guards provided with your equipment; they act as a barrier between the moving parts and your body. Don't reach around, under or through a guard and always report missing or broken barriers to your supervisor. Turn equipment off and use lockout/tagout procedures before adjusting, clearing a jam, repairing, or servicing a machine.

Vehicles, powered doors, and forklifts can pose a crush hazard unless they have been blocked or tagged out. Never place your body under or between powered equipment unless it is de-energized. Doors, file drawers, and heavy crates can pinch fingers and toes. Take care where you place your fingers. Test the weight before lifting, carrying, and placing boxes as awkward or heavy loads can slip and pinch your hands or feet. Get help or use tools to move large and/or heavy items.

If you have ever slammed your finger in a door, you can appreciate the pain associated with this common type of injury. Take the time to learn about the pinch point hazards in your workplace so you don't learn about the consequences first hand (and yes, the pun was intended!).

The three best things: to be humble amidst the vicissitudes of fortune; to pardon when powerful; and to be generous with no strings attached."

Muhammad

